

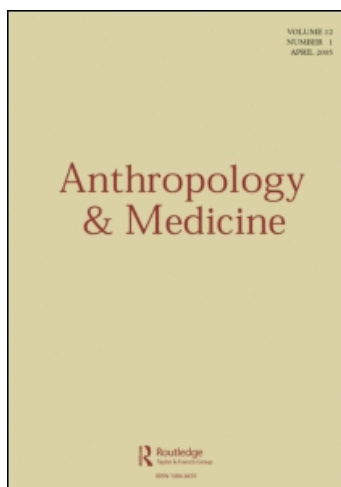
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Ceremonial tobacco use in the Andes: implications for smoking prevention among indigenous youth

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The purpose of this study was to identify Andean youth's beliefs regarding ceremonial tobacco use and to discuss potential applications of findings in tobacco control interventions. The study was conducted in the Province of Jujuy, Argentina among 202 boys and girls, 10 to 20 years of age, living in rural and urban areas. The world of beliefs and meanings became accessible by asking youth to focus on tangible experiences regarding the *Pachamama* ceremony, a ritual honoring Mother Earth. Concepts such as reciprocity, the unity of material and spiritual realms, and the complementary nature of opposite forces were linked to beliefs about ceremonial tobacco use. Three domains for understanding smoking behaviour beliefs and norms were identified including mechanisms of production, conceptual tenants and behavioural expressions. These findings suggest that tobacco control interventions based on solidarity, reciprocity, and non-rational ways of learning are more culturally appropriate for native populations in the Andes than the current individual behaviour change models and have the potential applications with other indigenous populations. The research methods also have the potential for generalized application in cross-cultural studies of health behaviours in understudied populations in middle and low-income countries.

Keywords: tobacco use; indigenous peoples; adolescents; Latin America

Introduction

It is estimated that 250 million children alive today will die from cigarette smoking; 70% are from low and middle-income countries (Jha and Chaloupka 2000). Latin America has the highest use of tobacco by youth (22%) among world regions (GYTSCG 2002). Within Latin America, Chile and Venezuela have, respectively, the highest (72%) and lowest rates (22%) of ever smoking among youth. In addition, about 70% of children are exposed to second-hand smoke in their homes in the Southern Cone (Argentina, Chile, Uruguay), which has the highest adult smoking rates (40%) in the region (PAHO 2000). High rates of smoking are cause for concern

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given its causal association with cancer (in ten sites), respiratory disease, heart attack, and stroke (USDHHS 1983).

Although the predicted death rate from tobacco is high in Latin America, there is a paucity of data on the impact of the tobacco epidemic on disadvantaged population groups, especially among indigenous peoples who are the largest disadvantaged group in this world region (Psacharopoulos 1994). In Bolivia and Peru, countries that have large indigenous Andean populations, ever-smoking rates among all youth (54%) are similar to those in Argentina (55%) where the Andean population is a minority concentrated mainly in the northwest provinces (GYTSCG 2002). In northwest Argentina, Andean youths' ever (50%) and current smoking rates (21%) are higher than for youth of European descent, 42% and 11% respectively (Alderete et al. 2009). This suggests higher levels of smoking among indigenous youth that may be masked by overall statistics.

Complicating the prevention picture, tobacco is a sacred plant that has been used for ceremonial purposes among indigenous populations in the Americas for centuries. Plants of the genus *Nicotiana* originated in the Andes and spread throughout the continent. Among indigenous peoples, tobacco is considered wholesome and sacred. Snuffing of wild varieties of native tobacco was an important ancestral practice (de la Vega 1963), but it was also consumed by chewing, drinking, licking, smoking, and by enema. In small doses it serves as a stimulant, a hunger and thirst depressant, and an analgesic; in large doses it produces visions, trance, and catatonia. Tobacco has many social (to seal friendship, part of ceremonies), divination and propitiation (to predict or ensure good weather, fishing, successful courtship or harvest), spiritual (vision quest, trance, spirit consultation), and medical (curing) uses (Wilbert 1987). After the conquest, European colonizers transformed tobacco into a lucrative commodity, but the long-term impact of that transformation on indigenous peoples is not well understood today, particularly the role of contemporary ceremonial tobacco use in the progression to recreational consumption among youth.

The study was designed to address this question among indigenous youth in the Province of Jujuy, Argentina, a tobacco-growing region in the Southern Andes. Its purpose was to (a) identify indigenous Andean youth's beliefs, norms, and attitudes regarding ceremonial tobacco use, (b) examine these findings against perceived reasons for recreational tobacco use, and (c) discuss potential applications of findings in interventions to reduce recreational smoking among Andean youth.

Methods

Individual semi-structured interviews about ceremonial and recreational smoking beliefs and behaviours were conducted with 202 indigenous males and females 10 to 20 years of age, both smokers and non-smokers from rural and urban areas in all 16 districts of Jujuy. Participants were selected on the basis of theoretical sampling (Glaser and Strauss 1999). Since attitudes and beliefs are embedded in cultural systems that commonly operate at an unconscious level they are difficult to access through direct inquiry. The strategy to overcome this problem was to ask respondents to focus on the *Pachamama* ceremony, a ritual honoring Mother Earth that incorporates ceremonial tobacco use. Youth were asked to share their knowledge about the ritual and what they heard, did, saw, and felt during the

ceremony. The interviews were tape-recorded, transcribed, and coded thematically using NUD*IST software (Gahan and Hannibal 1997). Thematic codes like 'ceremonies', 'tradition', and 'culture', identified relevant text passages and were used in an iterative analytic process to document emerging themes about the cultural aspects of tobacco use leading to an understanding of the elusive world of belief and meaning with respect to ceremonial tobacco.

The *Pachamama* ceremony is widespread in the Andes. It is associated with the agrarian cycle and its purpose is to give thanks for what Mother Earth has provided. The ceremony is conducted by a spiritual leader or by a family member with the participation of relatives, friends, and neighbours. Offerings to *Pachamama* are placed in a hole dug into the ground and include agricultural products, *chicha* (a fermented corn beverage), tobacco, and coca leaves. Participants have collectively internalized the form and meaning of the ceremony since early childhood and participate with a mixed sense of reverence and revelry. In contemporary rituals alcoholic beverages such as wine, beer and liquor are used, and cigarettes have replaced tobacco leaves as offerings. This displacement of tobacco leaves most likely occurred between 1920 and 1950 when global cigarette consumption began to escalate (WHO 2002). However, there is no systematic study of how and when this transition took place or how the introduction of cigarettes affected ceremonial smoking behaviour.

Results

In the discussion below, the authors describe the emergent understanding of elements of the Andean worldview and ceremonial tobacco use in the *Pachamama* ceremony and how each of these thematic constructs might be used in smoking prevention strategies. The authors discuss four emergent themes below: historical continuity, cosmological beliefs (holism, reciprocity, and balance), the hierarchy of social relations and respect for elders and tradition, and norms governing ceremonial tobacco use. These results are summarized in Table 1. The authors then turn to a discussion of how youth characterize secular, recreational use of tobacco in contrast to ceremonial use and close with a discussion of how the results can be integrated into smoking prevention programs for Andean youth.

Historical continuity

Andean youth are reared with an understanding of the ancient origin and historical continuity of the *Pachamama* ceremony. As these young men indicate, offerings to *Pachamama* transcend time and ensure the continuity of life across generations.

I was told that it is a ritual that comes from long time ago. (Rural male, age 18, smoker)
Pachamama, I have heard that it comes from generation to generation. People get together, feed Mother Earth, praise her, and pray to have good fortune and progress for the coming year. (Urban male, age 17, non-smoker)

Youth perceptions of the historical continuity of the *Pachamama* ceremony are relevant since they provide a sense of coherence and belonging, a critical factor in the establishment of group identity during adolescence (Phinney 1990). This kind of identity has been described as a feeling of being at home in your body, knowing

Table 1. Ceremonial and recreational smoking among Andean youth.

Andean world view	Pachamama ceremony	Ceremonial smoking
<i>Constructs</i>	<i>Constructs</i>	<i>Beliefs</i>
Unity of spiritual and material realms	Earth is a deity, earth needs nurturing	Tobacco is nexus between humans and the spiritual world
Reciprocity/solidarity	Ritual elements are offered in Gratitude for earth's benevolence	<i>Norms</i> Hierarchical family structure Learning from elders Enforcement of ritual tobacco use norms Nature and human beings over profits Tobacco is a vehicle to communicate with supernatural forces
Complementary nature of opposite forces	Deities and ritual elements possess powers of good and evil	<i>Attitudes</i> Respect for ritual elements Respect for adults Respect for the powers of natural elements
Interconnectedness of the elements of the universe	Our actions must comply with rules of the universe, if we fail to do so, harm can befall us	
Western world view	Tobacco use in everyday life	Recreational smoking
<i>Constructs</i>		<i>Beliefs</i>
Materialism		Tobacco products are a commodity Emphasis on physical appearance and material assets Economic status symbol
Individualism	Tobacco is used for image building, social status, pleasure and/or in response to cravings	<i>Norms</i> Few or no restrictions Lack of rule enforcement Individual freedom over collective well-being Learning from the media and advertisement <i>Attitudes</i> Limited concern about health effects on others Limited respect for adult hierarchy Profits over people

where you are going, and experiencing an inner assuredness of recognition from those who are important to you (Erickson 1968). Group identity plays a role in behavioural patterns of substance use among youth. In particular, ethnic or cultural identity can foster the development of anti-drug use norms (Love et al. 2006; Marsiglia et al. 2004) or increased drug use (James et al. 2000), indicating that its effect may be mediated by other factors like social and familial influences or peer subcultures (Dornelas 2005; Jessor et al. 1998).

Cosmological beliefs

The Andean world view encompasses several core constructs that include the unity of material and spiritual realms, social reciprocity, and the complementary nature of opposite forces such as the interplay of good and evil or hot and cold (Van den Berg and Schiffers 1992). These core elements of the Andean worldview emerge from young people's descriptions of the *Pachamama* ceremony. The accounts of different respondents about the experience and meaning of the ceremony demonstrate coherence and convergence, providing evidence that their beliefs about traditional ceremonies are grounded in a core set of collectively constructed and shared meanings about holism, reciprocity, health and illness, hierarchy, and respect, each of which is discussed below.

There are no inanimate objects in the Andean worldview. Rather, material and spiritual aspects coexist in each and every element of the universe – including human beings, animals, plants, and minerals, and this embodies holism (Polia Meconi 1996). The land, *Pachamama*, provides material sustenance, but it also possesses the attributes of a deity or a spiritual entity that can fill a person with joy:

Pachamama means time and space, the time of our lives and the space we occupy...each of us has her in our own being...she makes me feel happy. (Rural male, age 18, smoker)

In Andean societies, the activities of daily life are infused with spiritual meaning. The offerings used in propitiatory practices, including tobacco, are perceived to possess both a material and a spiritual nature. This belief in the dual nature of tobacco stands in stark contrast to its treatment as a commodity in Western society, providing a basis for critique of its portrayal in advertisements and the profit-making aims of tobacco companies.

Households in the Andes rely on family members to provide labour and skills for subsistence activities. Andean institutions that ensure mutual assistance have existed for thousands of years. Such reciprocity and solidarity take on a variety of forms (Osorio Acuña 1992). The *ayni* is a system of reciprocity involving an exchange of labour that cannot be reciprocated with money, only with work (Harris 1987). Reciprocity is a core concept in the Andean belief system that provides the social basis for the *Pachamama* ceremony.

We give things to the Earth, we venerate her, because the majority of the people believe that in doing so we will receive more food, all things come from her, our crops. (Urban female, age 15, smoker)

Thus, the *Pachamama* ceremony reinforces the pervasive theme of reciprocity and interrelatedness of the land, the people, and the cosmos. Among Andean peoples this results in an emphasis on the common good over individual success, a construct

that could be enlisted to justify the protection of non-smokers from exposure to second hand smoke.

The complementary nature of opposite forces, much like the concept of yin and yang in Chinese philosophy, explains the dynamics of the ever-changing life energy in the universe. Respondents explained the dual nature of good and evil and the need to balance such forces.

Pachamama is a ritual to keep the house in harmony, so you feel better, so evil will go away. That is what one believes, and one feels better. (Urban male, age 14, smoker)

The idea of balance is crucial to the health belief system. In the Andes, as in many cultures, health is conceived as the maintenance of a state of harmony with nature and the universe within the context of a constant interplay of the forces of good and evil. Thus, *Pacha*, Mother Earth, is both a source of healing and of illness. This is also true for the ceremonial offerings made to her, including tobacco. Health is also contingent on maintaining harmony in social relationships by observing social norms and meeting social obligations. Maintaining harmony with nature especially through ritual offerings is especially important, hence the importance of the *Pachamama* ceremony. In this world view, the land provides life and sustenance but it can also take life away if it is not properly appreciated and attended to through rituals and offerings:

Sometimes the earth takes you away, takes your life away. (Rural male, age 13, smoker)

These cosmological beliefs can be enlisted in prevention of tobacco use by highlighting the interplay between good and evil forces. Each ritual element has a power that cures and a power that kills (Polia Meconi 1996). This concept can be used to explain the positive and negative aspects of using psychoactive substances such as tobacco and to modify beliefs about the social acceptability of recreational smoking. Tobacco could be framed dualistically as a substance that can have negative health effects when used outside of the ritual context.

Hierarchy and respect

Youth refer to two elements in the *Pachamama* ceremony that manifest their knowledge and acceptance of the hierarchical social relations of Andean society, adult leadership and age-based participation order, as the following passage illustrates.

My grandmother, she starts praying, she prays for everybody. Then, she starts giving (*Pachamama*) the food, then the drinks, then she lights a cigarette. That is the ritual that we do. (Urban male, age 17, smoker)

Although all participants must take a turn giving offerings to Mother Earth, there is a strict ordering sequence; elders first, adults next, and children last. The acceptance of the hierarchical order of the ceremony could serve to reinforce the authority of adult family members in conducting family life. Enlisting the aid of ceremonial leaders, elders, and parents could be used to legitimate campaigns to change perceptions of tobacco and its recreational use.

Study respondents said that they approach the *Pachamama* ceremony with a respectful attitude. This is a cultural practice that has been internalized with a positive affect.

With my family I always ask something from *Pachamama*. I simply ask that she helps me and I respect her at the time when I am doing these things. (Urban female, age 16, smoker)

An attitude of respect facilitates compliance with the norms and rules that guide the ceremony and the use of its ritual elements. Respect for the ancestors and tradition is related to historical continuity and contributes to the maintenance of a sense of coherence and belonging. It is likely that youths who profess respect might be more prone to value the teachings of adults and role models.

Ceremonial tobacco use

In the ritual context, tobacco acquires magical and supernatural characteristics. The power of tobacco is visualized, felt, and internalized as adults perform the rituals or, on occasion, explain the properties of tobacco. Lit cigarettes set around the ceremonial opening provide a venue for communication with Mother Earth. At this time the magical forces of tobacco are released in the smoke and require respect and care in handling. As the smoke diffuses upward, it carries messages to and from the spiritual world. Humans ask for good fortune, and the response of the spirits materializes in the shape of the ashes. Elders have the knowledge to interpret the ashes and decipher their signs to foretell the future.

The tradition is to set the cigarette standing around the opening. According to my father if it burns to the bottom you are going to be fine. If the cigarette is not burning it is a bad omen. (Urban male, age 17, non-smoker)

My grandmother would help us set the cigarettes on the Earth and when they were consumed she would read [in the ashes] how long you were going to be alive. (Rural female, age 16, non-smoker)

This ritual use of cigarettes is far removed from the secular and careless manner in which cigarettes are used in recreational settings for the simple goal of immediate pleasure seeking. Polia Meconi (1996) asserts that the ritual use of psychotropic substances among indigenous peoples in the Americas is based on their refusal to accept western ideas about matter being the only form of reality and sensory and rational perception. It is based on a theory of natural law that is different from scientific understandings (Fiske and Shweder 1986). The belief that tobacco is a means of communication with the supernatural might discourage its secular use. Highlighting the misuse of tobacco's power to seek material pleasure rather than spirituality might inhibit smoking uptake by youth.

Smoking is permitted only among adults during the *Pachamama* ceremony. However, the age at which youths are allowed to smoke ceremonially varies by each family's perception about when young people reach adulthood.

Interviewer: How old does someone have to be to be considered a child?

Respondent: It depends, for example in my family to be a child is to be younger than eighteen years. (Rural male, age 16, non-smoker)

Control over cigarettes is also maintained by adults during the ceremony,

Interviewer: Did you ever light the cigarette?

Respondent: No, children never have to light it, only the adults. (Rural male, age 15, smoker)

My father lights it for me [the cigarette] and I set it there, I bury it. (Urban male, age 17, non-smoker)

Thus, adults oversee and guide cigarette manipulation by children and youth, as they do with all the ritual elements of the ceremony.

Youth have a clear understanding of ceremonial smoking rules whether or not they are recreational smokers. They consistently reported that they had received repeated messages from their elder tutors that children are prohibited from smoking during the ceremony. While young people who smoke talked freely about their smoking behaviour in recreational contexts, they denied smoking during the *Pachamama* ceremony in the presence of adults.

The norm that it is not appropriate for children and adolescents to light cigarettes or to smoke in ceremonial contexts can be enlisted to prevent smoking initiation and to counter the social acceptability of recreational tobacco use in the wider social context.

Recreational smoking

None of the participants linked the meaning of ceremonial and recreational smoking either directly or indirectly. Reference to ceremonial smoking emerged only when youth were asked to describe the *Pachamama* ceremony. A pervasive explanatory factor for recreational smoking initiation among youth interviewed was peer pressure (Stewart-Knox et al. 2005). This occurred in a variety of settings outside of the home and away from parents – at school, in the streets, and very often in dance halls where flirting adds sexual drama and exposure to the social cues for smoking.

The youth in this study shared common experiences of peer-induced smoking experimentation. Some resist the pressure:

Interviewer: Who offered you cigarettes?

Respondent: My friend from around the corner.

Interviewer: How old is your friend?

Respondent: Seventeen. But I did not want to smoke. (Urban male age 11, non-smoker)

Others give in to pressure from their peers:

We went to the dance. Then they lit a cigarette and all started smoking and started telling me things, insulting me, and I left and returned after a while but they kept insisting and at the end, I gave in because I could not take it anymore.

Interviewer: If you want to be their friend, do you have to smoke?

Respondent: I would think so, because if anybody is part of the group, after a while they are smoking. (Urban male, age 14, smoker)

These accounts are illustrative of the social context and reasons for recreational tobacco use. They highlight the difference between secular and ceremonial motivations and behaviours that are clearly conceptualized as separate issues in the minds of young people. Ceremonial tobacco use takes place in the controlled context of mystical ceremonies linking human beings to the physical and supernatural world. In the secular world, tobacco is used to ease social interactions and to assist young people cope with the pressures of modern life.

The investigation into beliefs about ceremonial tobacco use via the trope of the *Pachamama* ceremony suggests that there is a strong consensus among the youth interviewed about its nature and meaning and its importance in community life and cultural continuity. It is noted here that there were no differences in beliefs about the ceremony or the ritual use of tobacco expressed by

Table 2. Culturally focused tobacco prevention interventions: suggested guidelines and activities derived from qualitative work.

CONCEPTUAL TENETS OF ANDEAN NORMS AND BELIEFS

Reciprocity/solidarity

- Develop skills to avoid inducing peers to smoke
- Reinforce the role of smokers as keepers of the well being of non-smokers
- Reinforce means to practice solidarity in all contexts of life

Holism

- Contextualize tobacco as a broad social issue
- Support youths who face multiple stressors

Indigenous group-identification

- Reinforce indigenous practices and beliefs
- Address stress caused by contradictions between indigenous and western beliefs and lifestyles

MECHANISMS OF PRODUCTION OF NORMS AND BELIEFS

Learning by internalizing information in a non-rational manner

- Engage youth in actions to reduce environmental cues (e.g. restrictions to smoke in public places)
- Involve parents and other role models in prevention activities

Youths' beliefs are grounded on a set of collectively constructed and shared meanings.

- Facilitate the development of collective meanings about the connections between smoking and the social and political environment
- Develop media literacy
- Discuss the corporate behaviour of the tobacco industry
- Discuss the relationship between specific tobacco control activities and Indigenous beliefs and norms

BEHAVIOURAL EXPRESSIONS OF ANDEAN NORMS AND BELIEFS

Restrictive use of ceremonial tobacco

- Discuss implication of the power of the tobacco plant
 - Discuss youths' attitudes and feelings when participating in ceremonies
 - Organize discussions about the indigenous world view
 - Strengthen support for restrictive norms of ceremonial tobacco use
-

sex, residence (urban or rural), or smoking status. Throughout this section, ways that prevention strategies could make use of traditional attitudes about the sacred nature of tobacco have also been suggested. These implications for culturally focused prevention interventions are summarized in Table 2.

Discussion

Contemporary cognitive theory views culture as a reality embedded in a morally laden schema composed of values and causal beliefs exemplified in behaviours and practices. Members of a cultural community construct a shared reality and behave rationally within the terms of their own reality (Shweder 1996). The youth in this study learned how to behave within their culture in a non-rational manner, through a process of learning by doing. Recent work on situated cognition challenges the view of learning as a distinct activity or end in itself, set off from daily life, and emphasizes its integration into everyday activities, purposes, and contexts (Goodnow 1990). Learning is conceived of as a culturally supported process occurring through

interaction rather than as an individual achievement. This viewpoint underscores the importance of cultural practices in sustaining cultural learning (Bordieu 1990).

However, as Geertz (1957) noted, the web of meaning – the tools of traditional cultures such as stories, songs, beliefs, rituals, ceremonial objects, costumes – no longer plays an overtly important role in western society where individuals turn to psychoactive substances to avoid feelings of worthlessness and confusion (Grob and Dobkin de Rios 1994). Recreational smoking among Andean youth seems to be rooted in phenomena that replicate themselves worldwide: peer pressure, self-image, passage to adulthood, and mood management. In short, modernity and the global tobacco industry have reached Andean youth, as they have other Native Peoples worldwide. Oetting and Goldstein (1979) postulated that Native American children live in two societies with conflicting values and beliefs. Similarly, Andean youths are caught between the traditional realm of rituals with their endogenous norms and values and the non-ritual western lifestyle. Conforming to indigenous norms and values conflicts with normative behaviours of western society portrayed through the mass media, creating a tension surrounding tobacco use. An analysis of the clash of these worldviews could be enlisted in prevention efforts for indigenous youth.

A cultural perspective for examining tobacco use contributes to an understanding of how meanings and norms motivate behaviour in different social groups. In western societies, motives tend to be formulated in individualistic terms with an emphasis on the desire to control one's own actions (Deci and Ryan 1985). In cultures emphasizing interdependent cultural views of the self-other, achievement is predominantly other-oriented (Maehr 1980) rather than ego-oriented (McClelland 1950). Among adults in non-western societies the well being of others and the fulfillment of one's duty to others are predominant for the achievement of both personal and group goals (Dalal et al. 1988). Thus, the psychological construct of internal locus of control with its individualistic emphasis does not account for the modes of self-control emphasized in non-western cultures that focus on control over internal states that might interfere with harmonious interpersonal transactions (Markus and Kitayama 1991). Shared locus of control is more salient in non-western societies (Weisz et al. 1984), and this poses problems for current theories of behaviour change that rely largely on reasoned action or social learning models of individual behaviour within a western understanding of locus of control (Ajzen 1991; Bandura 1977).

This study showed that there is a relationship between the context in which the use of psychoactive substances takes place – ritual or secular – and the social impact of that behaviour. Ceremonial use is ruled by social restrictions and a worldview laden with beliefs about the spiritual world. Understanding the components of the Andean worldview and culturally based ways of generating beliefs and norms offers the opportunity for developing interventions that can reinforce potentially protective cultural factors. For example, a broad contextualization and understanding of root causes of the tobacco epidemic can be facilitated by techniques that draw on the holistic perspective of the Andean worldview that focuses on concepts of duality and reciprocity, highlighting the spiritual role of tobacco. Collective discussions of indigenous youth's attitudes and feelings toward ceremonial tobacco use can be used to critique recreational use, and participation of youth in prevention interventions may facilitate collective experiences of learning-by-doing that can counter peer pressure experienced in the western social context.

Ceremonial tobacco use plays an important role in Andean life, maintaining restrictive norms that should preclude recreational use. Restrictive norms, however, can only be effective if circumstances internal and external to the ceremonial setting are consistent. The behaviour of adults and their role in the transmission of beliefs and norms in ceremonial contexts must match those in everyday life. They must supply youth with the personal strength to resist environmental smoking cues outside the ritual context. Just as ceremonial smoking norms are created and internalized collectively, the development of norms that apply in recreational contexts should be a collective endeavor based on values inherent to the indigenous worldview – solidarity, reciprocity, and group cohesion. Current approaches to youth smoking prevention appear to be overly weighted towards individual behaviour, such as resistance to peers for example, which from an indigenous perspective either distances the self from other community members or isolates some community members. Neither of these alternatives is normative within a collective orientation. Indigenous values dictate seeking the well being of the community as a whole.

Smoking prevention interventions for indigenous youth could benefit from empirical findings of studies like ours that assist in the identification of cultural factors that may enhance youth resilience to pressures to smoke. Traditional social networks, supportive family environments, non-conflictive cultural identification, self-esteem and a cohesive integration of individuals into their social world, have all been shown to enhance youths' ability to achieve improvements in health and well being (Cummins et al. 1999; Jessor et al. 1998; Marsiglia et al. 2004). The authors' findings provide a basis for addressing tobacco prevention among Andean youth through a better understanding of their lived experience. The authors have suggested ways that these indigenous worldviews that support respect and reverence for ritual use of tobacco can be integrated into smoking prevention programs.

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References

- Ajzen, I. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes* 50: 170–211.
- Alderete, E., C.P. Kaplan, S.E. Gregorich, R. Mejía, and E.J. Pérez-Stable. 2009. Smoking behavior and ethnicity in Jujuy, Argentina: Evidence from a low income youth sample. *Substance Use and Misuse* 44, no. 5: 632–46.
- Bandura, A. 1977. *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bourdieu, P. 1990. *The logic of practice*. Stanford, CA: Stanford University Press.

- Cummins, J.R., M. Ireland, M.D. Resnick, and R.W. Blum. 1999. Correlates of physical and emotional health among Native American adolescents. *Journal of Adolescent Health* 24, no. 1: 38–44.
- Dalal, A.K., A.K. Singh, and G. Misra. 1988. *Reconceptualization of achievement behavior: A cognitive approach attribution theory and research*. New Delhi: Wiley Eastern.
- de la Vega, G. 1963. *Inca (1609). Comentarios reales II*. Madrid, España: Biblioteca de Autores Españoles.
- Deci, E.L., and R.M. Ryan. 1985. *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Dornelas, E., C. Patten, E. Fischer, P.A. Decker, K. Offord, J. Barbagallo, S. Pingree, I. Croghan, and J. Ahlwalia. 2005. Ethnic variation in socioenvironmental factors that influence adolescent smoking. *Journal of Adolescent Health* 36, no. 3: 170–7.
- Erickson, E.H. 1968. *Identity, youth and crisis*. New York: Norton.
- Fiske, D.W., and R.A. Shweder. 1986. *Metatheory in social science: Pluralism and subjectivities*. Chicago: University of Chicago Press.
- Gahan, C., and M. Hannibal. 1997. *Doing qualitative research using QSR Nud*ist*. London: Sage.
- Geertz, C. 1957. Ethos, world-view and the analysis of sacred symbols. *The Antioch Review* 17: 421–37.
- Glaser, B.G., and A.L. Strauss. 1999. *The discovery of grounded theory: Strategies for qualitative research*. Chicago, IL: Aldine.
- Global Youth Tobacco Survey Collaborative Group (GYTSCG) 2002. Tobacco use among youth: A cross country comparison. *Tobacco Control* 3, no. 11: 252–70.
- Goodnow, J.J. 1990. The socialization of cognition: What's involved? In *Cultural Psychology*, ed. J.W. Stigler, R.A. Shweder and G. Herdt. Cambridge: Cambridge University Press.
- Grob, C.S., and M. Dobkin de Rios. 1994. Hallucinogens, managed states of consciousness, and adolescents: Cross-cultural perspectives In *Psychological Anthropology*, ed. P.K. Bock. Westport: Praeger.
- Harris, O. 1987. *Economía étnica*. La Paz, Bolivia: Hisbol.
- James, W.H., G.K. Kim, and E. Armijo. 2000. The influence of ethnic identity on drug use among ethnic minority adolescents. *Journal of Drug Education* 30, no. 3: 265–80.
- Jessor, R., M.S. Turbin, and F.M. Costa. 1998. Protective factors in adolescent health behavior. *Journal of Personality and Social Psychology* 75, no. 3: 788–800.
- Jha, P., and F. Chaloupka. 2000. *Tobacco control in developing countries*. Oxford: Oxford University Press.
- Love, A.S., Z. Yin, E. Codina, and J.T. Zapata. 2006. Ethnic identity and risky health behaviors in school-age Mexican-American children. *Psychological Reports* 98, no. 3: 735–44.
- Maehr, M.L., and J.G. Nicholls. 1980. Culture and achievement motivation: A second look. *Studies in Cross-Cultural Psychology* 3: 221–67.
- Markus, H., and S. Kitayama. 1991. Culture and the self-implications for cognition, emotion and motivation. *Psychological Review* 98, no. 2: 224–53.
- Marsiglia, F.F., S. Kulis, M.L. Hecht, and S. Sills. 2004. Ethnicity and ethnic identity as predictors of drug norms and drug use among preadolescents in the US Southwest. *Substance Use and Misuse* 39, no. 7: 1061–94.
- McClelland, D. 1950. *The achieving society*. New York: Norton.
- Oetting, E.R., and G.S. Goldstein. 1979. Drug use among Native American adolescents In *Youth drug abuse: Problems, issues, and treatment*, ed. G. Beschner and A.S. Friedman. Lexington, MA: Lexington Books.
- Osorio, Acuña, J.M. 1992. *Parentesco, reciprocidad y jerarquía en los Andes*. Lima, Perú: Pontificia Universidad Católica del Perú. Fondo Editorial.

- Pan American Health Organization (PAHO) 2000. *El tabaquismo en América Latina, Estados Unidos y Canadá 1990-1999*. Washington DC: Pan American Health Organization.
- Phinney, J. 1990. Ethnic identity in adolescents and adults: A review. *Psychological Bulletin* 3, no. 108: 499–514.
- Polia Meconi, M. 1996. *Despierta, remedio, cuenta: Adivinos y médicos del Ande*. Lima, Peru: Pontificia Universidad Católica del Perú. Fondo Editorial.
- Psacharopoulos, G.P.H. 1994. *Indigenous people and poverty in Latin America: An empirical analysis*. Washington, DC: The World Bank.
- Shweder, R. 1996. True ethnography: The lore, the law and the lure. In *Ethnography and human development*, ed. R. Jessor, A. Colby, and R. Shweder. The John D. and Catherine T. MacArthur Foundation Series on Mental Health and Development. Chicago: University of Chicago Press.
- Stewart-Knox, B., J. Sittlington, J. Rugkasa, S. Harrisson, M. Treacy, and P. Santos Abaunza. 2005. Smoking and peer groups: Results from a longitudinal qualitative study of young people in Northern Ireland. *British Journal of Social Psychology* 44, no. 3: 397–414.
- United States Department of Health and Human Service (USDHHS) 1983. *The health consequences of smoking: Cardiovascular diseases*. DHHS Publication No. (PHS) 84-50204 Rockville, Maryland: United States Public Health Service. Office of the Surgeon General.
- Van den Berg, H., and N. Schiffers. 1992. *La cosmovisión Aymara*. La Paz, Bolivia: Hisbol.
- Weisz, J., F.M. Rothbaum, and T.C. Blackburn. 1984. Standing out and standing in: The psychology of control in America and Japan. *American Psychologist* 39, no. 9: 966–9.
- World Health Organization (WHO) 2002. *The tobacco atlas*. Geneva, Switzerland: World Health Organization.
- Wilbert, J. 1987. *Tobacco and shamanism in South America*. London: Yale University Press.