

RESEARCH PAPER

Tobacco use in the Dominican Republic: understanding the culture first

A M Dozier, D J Ossip-Klein, S Diaz, N P Chin, E Sierra, Z Quiñones, T D Dye, S McIntosh, L Armstrong

Tobacco Control 2006;15(Suppl 1):i30-i36. doi: 10.1136/tc.2005.014852

Objective: To conduct formative research on the landscape of tobacco use to guide survey and subsequent intervention development in the Dominican Republic (DR).

Design: Rapid Assessment Procedures, systematic qualitative methods (participant-observations, in-depth interviewing, focus groups) using bilingual mixed age and gendered teams from the United States and DR.

Subjects: Over 160 adults (men and women), ages 18 to 90 years, current, former and never smokers, community members and leaders from six underserved, economically disadvantaged DR communities.

Main outcome measures: Key domains: tobacco use patterns and attitudes; factors affecting smoking initiation, continuation, quitting; perceived risks/benefits/effects of smoking; and awareness/effects of advertising/regulations.

Results: Perceptions of prevalence varied widely. While "everybody" smokes, smokers or ex-smokers were sometimes difficult to find. Knowledge of health risks was limited to the newly mandated statement "Fumar es prejudicial para la salud" [Smoking is harmful to your health]. Smokers started due to parents, peers, learned lifestyle, fashion or as something to do. Smoking served as an escape, relaxation or diversion. Quit attempts relied on personal will, primarily for religious or medical reasons. Social smoking (custom or habit) (< 10 cigarettes per day) was viewed as a lifestyle choice rather than a vice or addiction. Out of respect, smokers selected where they smoked and around whom. Health care providers typically were reactive relative to tobacco cessation, focusing on individuals with smoking related conditions. Tobacco advertising was virtually ubiquitous. Anti-tobacco messages were effectively absent. Cultures of smoking and not smoking coexisted absent a culture of quitting.

Conclusions: Systematic qualitative methods provided pertinent information about tobacco attitudes and use to guide subsequent project steps. Integrating qualitative then quantitative research can be replicated in similar countries that lack empirical data on the cultural dimensions of tobacco use.

See end of article for authors' affiliations

Correspondence to:
Ann M Dozier, RN, PhD,
Department of Community
and Preventive Medicine,
601 Elmwood Avenue –
Box 324, University of
Rochester Medical Center,
Rochester, New York
14642, USA;
ann_dozier@urmc.
rochester.edu

A homeowner whose health conditions were aggravated by smoke painted large block letters above her front door to remind her guests: "Por favor, no fuma" [Please, do not smoke].

Tobacco consumption is increasing worldwide, disproportionately affecting low- and middle-income nations.¹ Adequately and systematically characterising tobacco use in countries at the early stages is critical to reversing this dangerous public health trend.

Tobacco use in the Latin American and Caribbean (LAC) region mirrors this global trend.² Despite considerable inter-country variability, overall about one-third of the region's adults smoke.² Regional deaths from tobacco-related diseases are expected to triple by 2020, approaching 10%,³ and the full health impact of tobacco use on the region has yet to be realised.⁴ The smoking epidemic's four stages are characterised by increasing smoking prevalence among men first with subsequent increases in smoking related deaths (stages 1–3) before smoking begins to decrease (stage 4), and a parallel but delayed pattern among women (stages 2–4). Latin America meets the criteria for stage 2,³ with male smoking prevalence increasing to greater than 50%, increases in smoking among women, and increasing lung cancer deaths among men.⁶

Some significant advances in tobacco control have been made: 22 Latin American and Caribbean countries had signed on to the Framework Convention for Tobacco Control (FCTC) as of 19 August 2005. Yet, for other countries, including the Dominican Republic (DR), recognition of the impact of

tobacco use is at such an early stage that there have been no significant political or public health infrastructures or champions for tobacco control, no significant public education campaigns, and movement towards the FCTC has not been on the horizon. As documented by Sebie and colleagues,⁷ transnational tobacco companies engage in significant efforts to thwart these initiatives in Latin America. Engaging such early stage countries will be imperative to the region's effective tobacco control and to stem the epidemic of tobacco use and its resulting morbidity and mortality.

The DR is a tobacco-growing country. No surveillance systems monitor tobacco use, and scant systematic data are available. True tobacco use prevalence is unknown, due to varying survey methodologies and differing study populations in the few available reports,⁸ though the DR has been ranked as first or 12th in smoking rates in Latin America.²⁻⁹ Estimates of adult smoking prevalence range from a high of 66% for males, the highest in the region,¹⁰ to a low of 24%.¹¹ Rates for females range from 33%¹¹⁻¹² to 14%.¹⁰ Tobacco-related diseases are significant; cardiovascular diseases were the most frequently reported causes of death from 1990 to 1994 (one third of total mortalities). Concurrently, malignant neoplasms rose from being the fourth to the third cause of

Abbreviations: CTC, Community Technology Centers; DM, Dominican Republic; FCTC, Framework Convention for Tobacco Control; LAC, Latin American and Caribbean; LINCOS, Little Intelligent Communities; RAP, rapid assessment procedure; UR, University of Rochester

death,² with particular increases in respiratory system cancers.¹³

Determining tobacco use prevalence and its associated health effects informs the scope of the problem but not the solutions. Understanding the cultural context of tobacco use, including individual, community and societal aspects, are prerequisites to designing effective interventions.^{14 15} A single household survey in the DR capital, Santo Domingo,¹¹ indicated that most smokers wanted to quit, though fewer than half believed they would be successful in five years. Exposure to tobacco use was high. Among those under age 21, 40% were from a household with a smoker, and 90% had friends who smoked.

Sparse systematic data about DR tobacco use presented challenges and opportunities for conducting research and guiding meaningful intervention.¹⁶ The current project is part of a National Institutes of Health Fogarty International Center initiative linking experienced investigators from North America with partners in low and middle income countries to build in-country capacity and research for tobacco control. The current project uses existing technology centres (Community Technology Centers; CTC), based in underserved, economically disadvantaged DR communities, to serve as focal points for design and implementation of local tobacco control and cessation activities. Project goals include: develop collaborative network structures; establish tobacco use surveillance; implement systematic assessments of tobacco use attitudes, beliefs, and practices; develop and test interventions using the CTC infrastructure and the health care community; build DR research capacity; and develop a methodology for global translation of effective interventions through similar technology centres.

Understanding the cultural dimensions surrounding tobacco use became an imperative for this project, given the lack of empirical data to guide the assessment of tobacco use and intervention design. Survey development called for including variables and culturally-specific terms to reflect the range of community views and practices. The current report provides a model for implementing a qualitative research methodology to guide survey and subsequent intervention development. This integrated approach of qualitative followed by quantitative research can be replicated in other underserved countries that lack empirical data on the cultural dimensions of tobacco use.

METHODS

This project employed an anthropologically based method, rapid assessment procedure (RAP). RAP is a mixed-methods qualitative approach for time-efficient formative research, for assessing and evaluating programmes and interventions within defined communities.¹⁷ Though the short timeline of RAP cannot produce a comprehensive ethnography, findings provide key insights about aspects of a community (for example, how different groups perceive community needs, understand causes, and view solutions).

Participating communities

The project selected six underserved, economically disadvantaged DR communities based on: population density around the CTC; operational CTC with community work/advisory group; balance of rural (n = 2), peri-urban (remote location with urban structure; n = 2) and urban (n = 2), and tobacco region (three each of tobacco- and non-tobacco growing); geographic distribution; and presence of health care professionals. Community characteristics are summarised in table 1.

Unemployment was universally high, while access to electricity, running water, telephone service, post-primary education, paved roads and public transportation varied.

Table 1 Characteristics of project communities

Community	Type/ population	Tobacco growing	Other characteristics
A	Urban >25000	No	School: primary and secondary Rural clinic Suburb of second largest city
B	Urban >25000	Yes	School: primary and secondary Public hospital (tertiary level) County seat
C	Peri-urban 6–10000	No	School: primary and secondary Public hospital (secondary level) On border with Haiti
D	Peri-urban 6–10000	Yes	School: primary and secondary Rural clinic
E	Rural <2000	No	School: primary Rural clinic
F	Rural <2000	Yes	School: primary Rural clinic

Health care resources ranged from a rural clinic only (staffed by one “medico pasante” (physician completing a year of medical rotation/residency), a nurse, a drug dispensary (“botica”) manager, and occasionally a health promoter) to a tertiary public hospital (including medical specialists, inpatient and emergency services). Only the two urban communities had pharmacies; however, each community had a “botica” that sold lower cost, government subsidised drugs from a limited formulary (no nicotine replacement medications were available). Before the current project, systematically collected data on tobacco use were not available.

CTCs, originally called LINCOS (Little Intelligent Communities) were conceived and developed through the Foundation for Sustainable Development, based in Costa Rica, in collaboration with corporate and academic partners (Microsoft, Hewlett-Packard, MIT’s Media Lab and the University of Rochester). Each LINCOS was a large, metal container equipped with computers, fax and VCR/television, radio transmission capability and satellite internet access. Managed by community members (paid and volunteer), these resources were intended to address community issues of health, employment and the environment through training, communication access and equipment (soil and water testing; telemedicine). The DR was an early adopter of this concept and modified it over the past six years replacing the containers with concrete buildings and emphasising the training and communication components. By 2003, 15 communities had a CTC with another 15 underway (by 2006 there were 30 CTCs). CTC sites in each community provided computer training, internet, telephone, copier and fax access, a local radio station, and a range of classes, with a small user fee charged for services. Paid coordinators and trainers staffed CTCs, and a community elected group managed each site. CTC staff was engaged for the current project.

RAPS procedures Measures

RAPS procedures employed a focused community assessment, applying anthropological techniques (primarily direct and participant-observations and in-depth interviewing), over 2–3 days per community. In addition, focus groups were conducted with naturally occurring groups in one community.

Prior research on tobacco use, coupled with earlier DR community RAPs (Dye, Chin and Dozier, 2001; Dye and Dozier, 2002; 2003), guided RAP protocol design. A semi-structured interview guide encompassed the following domains: tobacco use patterns; factors affecting smoking

initiation, continuation, quitting; perceived risks/benefits/effects of smoking; attitudes about smoking/tobacco use; and awareness/effects of advertising/regulations. Smokers and health care professionals were asked additional questions regarding advising practices. Interview logs (assessing adequacy of representation of geographic and sociodemographic subgroups) and matrices (assessing adequacy of data within domains) were completed during daily team debriefings to identify potential themes and assess progress.

Training

All team members completed two, 2-hour RAP training workshops, including discussion and role plays of data collection protocols and interview guide (within project teams and with a US-based Dominican-national teacher), participant-observations, ethical principles of field work, cultural competency, purposive sampling strategies, and analytic matrices.

Implementation

Two joint University of Rochester (UR)-DR interdisciplinary, mixed age and gender teams (3–4 members each) conducted RAPs in three communities each. Teams included bilingual members from the core UR and DR project staff, and two UR medical students/fellows. All interviews were conducted in Spanish.

As feasible, team members stayed overnight in each community, allowing for observation of early morning and evening activities. An inclusive purposive approach shaped the selection of community respondents, thus providing a diversity of opinions¹⁸ by engaging individuals representing different neighbourhoods, social and economic groups, ages, genders, religious beliefs, leaders (formal and informal), and including both smokers and non-smokers, health care workers and CTC staff. The latter facilitated initial participant contacts with community members and leaders. Snowball sampling (referrals from respondents) identified additional interviewees, as did informal contacts during participant observations (for example, dialogue with store owners). Natural gatherings were used for informal focus groups in one community. Interviewing continued in each community until a sampling of individuals was obtained per protocol and a redundancy in themes emerged. Participant observation (in public places such as entertainment venues, health care settings and other public gathering places) supplemented interview data. To address potential barriers of limited literacy and the implied contractual obligations in DR society of a written consent form, verbal consent was approved for these minimal risk interviews. Before interview, a team member explained the project, offered anonymity to subjects, and assured confidentiality with the option to end or refuse at any time. Each respondent received a business card describing the project in Spanish (including study name, principal investigators, contact information for DR research group and research objectives).

Data analyses

Data analyses, completed over a six-month period, proceeded through three phases to ensure involvement of both UR and DR teams. First, during on-site data collection, each team met daily to review progress, monitor adequate respondent composition (for example, leaders, smokers, younger/older individuals), identify emerging concepts warranting further exploration, and determine next steps. As feasible, discussion between team leaders occurred daily (lack of consistent electricity and telephone access limited some daily contact). Both teams met together to debrief the process and initial impressions after each had completed one community's RAP.

At the final debrief for each community, key concepts were identified and served as the basis for the aggregate analysis.

Second, post-RAP, UR team members independently reviewed the detailed in-depth interview and observation notes from each team from each community, looking for words, phrases, concepts, and practices related to the original domains identified in the interview guide. Domain identification was then compared among analysts for consensus. Data were reviewed for additional relevant domains from communities that had not been identified in the interview guide. An analytic matrix compared domains against demographics to identify commonalities and differences across individuals and among communities. Third, before finalisation, draft iterations of these findings (per community and in aggregate) were distributed for feedback and twice discussed in person with DR-based project team members for verification and feedback.

RESULTS

Major themes fell into six content areas: tobacco use, tobacco availability and cost, perceptions regarding effects of tobacco use, quitting, anti-smoking messages, and the role of health care providers.

Respondents

Across communities, a total of 162 adults (ages 18 to over 80, approximately half male) participated in individual interviews (range 22–33 per community). An additional 20 participated through focus groups. The total sample consisted of 47% never smokers, 13% ex-smokers, and 40% current smokers. In each community, interviewees included at least one clergy member, two health care workers, two educators and one government official.

Tobacco use

Perceptions regarding prevalence

Tobacco use was viewed as widespread. Most respondents estimated that at least 50% and up to 90% of the adult population smoked (for example, “todo el mundo fuma” [everyone smokes]), although a few professionals and community leaders provided lower estimates (10–15%).

The general public's perceived universality of smoking contrasted sharply with interviewers' observations. Smoking, or evidence of it, was rarely observed either in public places or during in-home interviews. Even when litter was visible in public areas, cigarette packaging or butts were virtually absent. Identifying key informants who were smokers (or ex-smokers) was challenging in some communities, and often required referral from other community members. Based on observations, the RAP teams estimated smoking rates ranging from 20–40% depending on community (this was systematically measured in the project's later surveillance phase).

Smoking patterns

Smoking patterns ranged from non-daily social smoking (“sólo cuando estoy fuera con mis amigas” [only when I am out with friends]) to daily smoking of fewer than 10/day (“tres al día, por la mañana, la tarde y la noche” [three a day, in the morning, afternoon and evening]; “uno después de cada comida” [one after every meal]), more than 10/day (one small pack), or more than 20 a day. Light smoking was more common, with chain smoking rarely observed or reported.

Smokers used a range of tobacco products, including commercially packaged cigarettes (including Marlboro, Nacional, Costanza, Rubios, Latern), self-rolled cigarettes (“tabaco”, referred to as “tubano” or “pachuche”), cigars, homegrown tobacco in a pipe (“cachimba/o”), or chewed

tobacco. Cigarettes were the most common form of tobacco use. A distinction was made between “cigarettes” and “tobacco”, with “cigarettes” specifically referring to commercial brands, and “tobacco” specifically referring to self-rolled tobacco. Self-rolled “tobacco” smoking was more often seen in tobacco growing or rural communities and among older adults. Chewing was only noted in one community.

Who smokes, where, and with what?

Generally, older adults were seen as more likely to smoke (“los jóvenes fuman menos” [the young smoke less]). In urban areas, young adults’ tobacco use was also perceived as high, which respondents thought symbolised a search for maturity. In rural communities, smoking among adolescents was thought to be “hidden”, as it was viewed as prohibited (“los jóvenes no fuman en esta comunidad” [kids don’t smoke in this community]).

Many parents, even those who were or had been smokers, reported telling their children “no empieza a fumar” [do not start smoking]. Non-smoking respondents confirmed that their own parents, even the smokers, explicitly told them not to smoke.

Hidden smoking also occurred among some adults in some communities (“ella dice que no fuma pero veo su fumando detrás de su casa” [she says she doesn’t smoke but I see her smoke behind her house]) and may be associated with religious mandates (“los evangélicos le dice no fumar ni beber” [the evangelists tell you not to smoke or drink]). Hidden smoking was less evident in tobacco growing communities. Smokers were identified to interviewers as a matter of information, not judgmentally.

Gender differences in tobacco use across the communities varied, although smoking during pregnancy was rarely reported and viewed negatively (“usted no fuma cuando usted está embarazada” [you don’t smoke when you are pregnant]; “dejo durante ambos de mis embarazos” [I quit during both of my pregnancies]). Most communities regarded smoking rates among men and women as similar, some noted that younger women may be smoking more than younger men. More men were observed smoking in public. Some respondents mentioned that women were more likely to hide their smoking (“Fumo cuando mi marido no está en casa...él no sabe que fumo” [I smoke when my husband is not home...he doesn’t know I smoke]).

Smoking occurred primarily at home (sometimes outside, to avoid exposing others), at meal times, in entertainment venues (with alcohol), and at social events, such as fiestas and cock fighting (tobacco was rubbed on roosters to improve performance). Alcohol and tobacco companies help sponsor an annual community celebration [“patronales”]. At the few celebrations observed, many people were consuming alcoholic beverages, but few were smoking despite prominent cigarette advertising displays and kiosks.

Smoking and coffee drinking were viewed as inextricably linked. The latter association was universal across all communities (“Fumo siempre que tomo café” [I smoke whenever I have coffee]; “café y fumar van juntos” [coffee and smoking go together]).

Who does not smoke and why?

Non-smoking respondents identified several reasons for their decision to never start: “no hay beneficio” [there is no benefit]; “no me llama” [it did not call to me], “el humo me molesta” [smoke bothers me], and “padres no permitieron” [parents did not allow]. Never-smokers often added, “Gracias a Dios” [Thanks to God]. Negative health consequences or risks were not mentioned.

Respect for the non-smoker (“Respeto”)

Smokers appeared to respect non-smokers through conscious choices of where they smoked and around whom (“personas no fuman alrededor de los otros que no son fumadores” [“people don’t smoke around others who are not smokers]; “fumo afuera” [I smoke outside]). This was pervasive, despite the lack of clean indoor air regulations. Passive smoking was occasionally mentioned, and several indicated that it would be more harmful to non-smokers than to smokers who are accustomed to the smoke.

Why smokers smoke

Reasons cited for starting smoking included: it is “fashionable” or “cool” (“la moda”); it passes the time and manages boredom (“es algo hacer” [something to do]); is part of the agrarian life, a learned lifestyle, a result of the hard work conditions; and parents or peers/friends were/are smokers. External influences on smoking behaviour (for example, advertisements, TV; US contact) were not mentioned, despite the strong in and out migration between DR and US communities. Some respondents thought smoking was genetic.

Some smokers began as children, others in adolescent or early adult years. Adolescents were more likely to start to be fashionable, while passing the time was more commonly mentioned by adult-onset smokers. Parents who smoked modelled smoking or lifestyle behaviours that influenced children to start.

Elders influenced smoking initiation through their status as role models. Some smokers talked about helping their parents and grandparents obtain or light cigarettes. Others noted that smoking was common among older relatives, thus contributing to smoking as a learned lifestyle, or learned through stories of elders about smoking or smoking related illnesses (which may promote or discourage smoking).

Respondents believed that smokers continued to use tobacco as a diversion, and also for reasons somewhat different from why they started: to avoid problems (“el fumar es un escape de sus problemas” [smoking is an escape from one’s problems]); to relax (“el fumar me ayuda relajarse” [smoking helps me relax]); to suppress or stimulate the appetite; and to repel mosquitoes.

Tobacco availability and cost

Tobacco advertising was ubiquitous in all but one community. Large, colourful signs and promotional set-ups figured prominently (inside and outside) at nearly all colmados (small grocery stores) where cigarettes were readily available. Brand names and logos figured prominently in advertisements, rarely including other verbiage or depictions of individuals (smoking or not). Cigarettes were available in packages of 10 or 20 or as singles. Buying cartons or packs of 20 was rare. According to cigarette vendors, smokers are price sensitive; cigarette sales declined coincident with the increasing cost of cigarettes. Notably no one mentioned quitting because of cost increases or unemployment. Conversely, a few individuals in each community commented that some smokers buy cigarettes before food, exemplifying the smoker’s addiction or “vice”.

Perceptions about smoking’s effects

Among both smokers and non-smokers, smoking was generally viewed as harmful (“se daña” [“it hurts you]). When asked about the effects of smoking, respondents often quoted the newly mandated statement printed on cigarette packs and advertisements (“Fumar es perjudicial para la salud” [Smoking is harmful to your health]); however, they usually could not specify the nature of the harm. For example, the association between cancer and smoking was

rarely mentioned. While some respondents cited specific individuals whose deaths they attributed to smoking, other deaths, such as those from heart disease, were not similarly attributed. Self-rolled cigarettes were seen as less injurious to health, as homegrown tobacco was perceived as being “más natural” [more natural] than commercially made cigarettes.

Smoking was variously described as a custom, habit, vice or addiction. The choice of word depended on the community and individual. Smoking as a custom or learned behaviour, like eating preferences, was seen as an individual’s choice, a normal part of a learned lifestyle with no negative connotations. This learned lifestyle was more commonly associated with “tobacco” rather than cigarette consumption. Individuals who smoked more than 10 cigarettes per day were often considered as having a vice or being addicted. These had very negative connotations (including associations with drug abuse), were seen as not normal and more injurious to health. Smoking as a vice or addiction was described as acquired, something that caught an individual (like a cold) and could not be easily stopped (“no puede parar” [you cannot stop]). Vice was more commonly associated with commercial cigarette use.

Quitting

Quitting smoking commonly began after a crisis, physician pressure to stop due to an identified health problem (“mi cardiólogo me dijo tuve que parar” [my cardiologist told me I had to stop]), or a religious conversion. Other benefits to quitting were not mentioned. Very few individuals identified themselves as former smokers. Quit attempts primarily involved “fuerza personal” [personal will] and “ayuda de Dios” [help from God]. Only occasionally did anyone mention aids such as mints. Nicotine replacement therapy was not available in any of the project communities, and few respondents were familiar with “pills” to help with quitting.

Respondents made suggestions to help smokers quit, including “charlas” [talks], smoking cessation support groups, talking with ex-smokers, talking with doctors, and educating the community about harmful effects of smoking. When specifically asked, most smokers indicated a willingness (that it would be feasible and acceptable) to use a support person or expert to help them quit although fewer than one-third expressed any interest in ever quitting. Of these, most indicated they would like advice and help from health care professionals.

Anti-smoking messages

Anti-smoking advertising was not observed, except for the vague government-mandated warning (“Smoking is harmful to your health”) printed on cigarette packages and advertisements on billboards, posters and placards. This warning was well known to both cigarette (not “tobacco”) smokers and non-smokers. No other literature or anti-smoking messages were observed (including billboards, magazine or newspapers), or heard (radio or television), nor did respondents report hearing or seeing any. There did not appear to have been any national awareness campaigns about the dangers of smoking. Beyond seeing the effects of smoking on others, it was not clear how the few individuals with more detailed knowledge of risks obtained this information.

Sale of cigarettes to minors is illegal, though it was observed regularly and not consistently enforced. Few respondents were aware of this regulation.

Health professional community

No systematic collection of tobacco use data by the health care or public health community exists. A household survey [referred to as the “ficha familiar”] conducted by the government’s public health arm does not include tobacco

use, but does include sociodemographics, type of home/utilities, and health problems of household members. These data and forms are available at government-supported hospitals or clinic facilities (and may be referred to during a visit) but are not part of the records of private providers or specialists.

Of 17 health care providers interviewed, one had quit and three currently smoked. The role of physicians in smoking cessation varied widely. Across communities, health professionals often had inconsistent or incorrect information about the effects of tobacco use. Health care professionals’ comments reflected a lack of general pro-activeness in addressing patients’ smoking, most commonly asking about smoking only if the patient exhibited a health problem perceived as tobacco-related.

DISCUSSION

Rapid assessment procedures (RAPs) provided a qualitative examination of the cultural dimensions of tobacco use in six underserved, poor communities in the Dominican Republic, as a first step toward developing and implementing systematic quantitative assessments and interventions for testing. These methods are replicable in other low and middle income countries, providing a model for initiating tobacco control efforts from the community level in regions about which little is known and in which there has been little or no tobacco control activity.

Overall, community attitudes about tobacco use identified relatively high perceived prevalence of smoking; overall public smoking was infrequently observed by the research team in most communities. Chain smoking was rarely observed or reported. Light smoking (< 10 per day) was viewed as most common. Data on mean cigarette use from other low/middle income countries are limited and local definitions of light or heavy smoking not typically mentioned.^{19–20} Light smoking was associated more with custom, whereas heavier smoking was considered a “vice” that was out of the person’s control. A distinction was made between “cigarettes” (commercially available products) and “tobacco” (self-rolled), with the latter considered less risky.

Perceived health risks were vague and the benefits of quitting were rarely mentioned. Jha and Chaloupka made similar observations among other low and middle income countries.²¹ In general, DR smokers were not embarrassed about their tobacco use, although there was some evidence of hidden smoking. Regardless of whether they defined themselves as social smokers or addicted smokers, most perceived no pressure to quit from others (except in selected cases from health care professionals). Interestingly, some community respondents were far more concerned about reducing alcohol than tobacco consumption.

The landscape of tobacco use, as perceived by the communities in the current study, includes a culture of smoking co-existing with a culture of non-smoking, absent a culture of quitting. Few ex-smokers were identified, similar to others’ findings in low income countries.²² Few smokers reported making quit attempts or expressed an interest in making a quit attempt. While smokers were readily identified by others, ex-smokers were not. Compared to the influences mentioned that affect smoking initiation, only religious beliefs were associated with reasons to quit. Absent from comments about quitting were social or family pressures or encouragement, commonly seen in countries with more developed tobacco control programmes.^{22–24}

Equally noteworthy, despite widespread tobacco company advertising and easy availability of tobacco and cigarettes, community members did not mention these as influences on either initiation or continuation of smoking. Whether this is actually the case or whether they are unaware of the subtle

influence of advertising is uncertain. Price, while not cited as a factor by smokers, may have a role.

These findings provide key insights to inform the next phases of this project—surveillance/surveys and intervention design. For example, surveys should include questions on both “cigarette” and “tobacco” use, recognition of the distinction between “habit/custom” and “vice/addiction”, and items on knowledge and beliefs about risks of smoking and perceived benefits of quitting. In addition, surveys will assess the degree to which perceptions identified through RAPs can be generalised to the larger communities. For example, items would include prevalence of tobacco use, an area where community perceptions and interviewer observations diverged, and knowledge of health risks of tobacco use and benefits of quitting. Finally, in some communities where hidden smoking was noted and its prevalence remains uncertain, finding smokers to survey may present challenges.

For interventions, high exposure to tobacco advertising and low exposure to messages about risks of tobacco use was consistent across communities, and, if supported by survey data, suggest a need for public awareness campaigns as a first step toward correcting misperceptions (for example, health effects of smoking), motivating behaviour change, and stimulating policy changes (routine collection of prevalence data, restricting advertising). There may be a low prevalence of ex-smokers to serve as role models, and the reported interest in ever quitting among participants was low. The general lack of knowledge and pro-activeness of health care providers in tobacco cessation counselling suggest an opportunity to expand or redefine the role of the health care provider as interventionist in awareness raising, prevention and cessation activities. Religious beliefs, endorsement of the value of personal will in quitting, and reported interest in receiving services can serve as bases for development of intervention strategies. Other contextual factors to consider include the strong role of family members (as promoters or inhibitors of smoking initiation), the concept of respect vis a vis smoking around others, and whether the community grows tobacco.

Limitations

As noted, RAPs do not replace more detailed ethnographic approaches; however, using a structured methodology, deployed systematically around a focal topic, they do provide a general understanding of the salient concepts involved. Additionally, as with all qualitative research, findings are not meant to be generalised beyond the communities of study. While these findings are based on individuals’ perceptions, which may not reflect actual experiences, they represent an essential starting point for community and individual level surveys and interventions relative to behaviour change. Furthermore, some individuals may not have been fully forthcoming. While this is possible, use of triangulation in the design, data collection and analysis helps mitigate the effect of individuals’ reticence.¹⁷ Additionally this work does not represent an in-depth examination of the social context of smoking, but serves to better understand where to start. For this project these findings informed the subsequent phases of the project that included additional quantitative and qualitative data collection. While our community selection criteria may have unduly influenced our findings (for example, choice of communities with functioning CTC’s), earlier work (Dye, Chin and Dozier; Dye and Dozier) demonstrated wide-ranging commonalities across the original 15 CTC communities.

Conclusions

Understanding the cultural dimensions of tobacco use provides important insights into barriers and influences on

What this paper adds

Tobacco use in the Dominican Republic (DR), a country that has not previously been active in tobacco control, is poorly understood. As a tobacco growing country in stage 2 of the tobacco epidemic, the DR is well suited for tobacco control initiatives, however data for evidence based interventions are lacking. Prevalence studies focused on urban areas, students or professionals, and have yielded inconsistent results. Systematic prevalence data collection is absent and attitudinal studies are limited.

This study provides an initial qualitative look at the landscape of tobacco use in six underserved, economically disadvantaged communities. Results can be used to guide systematic survey and intervention development and testing. Findings revealed many similarities across the six study communities including a culture of smoking coexisting with a culture of not smoking, but absent a culture of quitting. Use of formative research involving qualitative methods to inform subsequent quantitative research provides a model for use in other populations globally for whom little or no data are available. Understanding the local cultural dimensions of tobacco use may be key to successfully engaging such early stage countries in tobacco control to avert or curtail the epidemic of tobacco use and the associated morbidity and mortality in low and middle income countries.

tobacco use at individual and community levels, and can influence awareness raising and cessation interventions. Clearer understanding of factors operating within communities may increase the likelihood that project interventions are accepted by the target population. The RAPs approach provides a model for beginning investigations in low and middle income countries that have not previously been involved in tobacco control. Successfully engaging such early-stage countries is a key component of global tobacco control.

ACKNOWLEDGEMENTS

The authors would like to acknowledge the following individuals who assisted in the data collection of this project: Omar Diaz, Dr Labib Syed and Dr Armin Poordabbagh, who assisted in data collection, Zulenmi Castillo and Adam Rains, who provided technical assistance in preparation of the manuscript, and Dr Paul McDonald, who provided invaluable feedback to the project’s investigators.

Authors’ affiliations

A M Dozier, Department of Community and Preventive Medicine, University of Rochester Medical Center, Rochester, New York, USA
D J Ossip-Klein, N P Chin, E Sierra, T D Dye, S McIntosh, L Armstrong, University of Rochester Medical Center, Rochester, New York, USA
S Diaz, Z Quiñones, Pontificia Universidad Catolica Madre y Maestra, Dominican Republic

Funding: This study was supported by NIH Fogarty International Center Grant #TW05945 (Ossip-Klein, PI)

Dr Ann Dozier and Dr Ossip-Klein on behalf of themselves and the other authors have no competing interest relative to the study reported in this manuscript

Approval from the University of Rochester IRB was obtained prior to beginning RAPs. Given the project’s preliminary stage, approval was not required from the DR’s nationally and internationally recognised ethics committee (IRB); however, the full protocol was submitted for their records

REFERENCES

- 1 **Jha P**, Ranson MK, Nguyen SN, *et al.* Estimates of global and regional smoking prevalence in 1995, by age and sex. *Am J Public Health* 2002;**92**:1002–6.

- 2 **Pan American Health Organization (PAHO).** *Health in the Americas.* Washington, DC: Pan American Health Organization, 1998, (Scientific Publication No.569, I).
- 3 **Murray CJL,** Lopez AD. Eds. *The global burden of disease, vol 1.* Cambridge, Massachusetts: Harvard University Press, 1996.
- 4 **Da Costa e Silva VL,** Koifman S. Smoking in Latin America: a major public health problem. *Cadernos de Saúde Pública* 1998;**14**(suppl.3):109–15.
- 5 **World Health Organization.** *Tobacco or health: a global status report.* Geneva: WHO, 1997.
- 6 **Thun MJ,** Calle EE, Rodriguez C, et al. *Cancer Epidemiol Biomarkers Prev* 2000;**9**:861–8.
- 7 **Sebrie EM,** Barnoya J, Perez-Stable E, et al. *Tobacco industry dominating national tobacco policy making in Argentina, 1966–2005* (September 1, 2005). Center for Tobacco Control Research and Education. Tobacco Control Policy Making: International, Paper Argentina. 2005. <http://repositories.cdlib.org/ctcre/tcpmi/Argentina2005>.
- 8 **Pan American Health Organization.** Epidemiological research at the American Cancer Society. *Tobacco or health: status in the Americas. A report of the Pan American Health Organization.* Washington, DC: Pan American Health Organization, 1992.
- 9 **Anon.** Report on the regional meeting on setting tobacco control research priorities for Latin America and the Caribbean. Rio de Janeiro, 17–19 August 1998. <http://archive.idrc.ca/ritc//riorep.htm> (Accessed May 1, 2005).
- 10 **de Los Santos T.** Country Collaborator's Report, Dominican Republic. Pan American Health Organization, (1990; unpublished), 173–174. Cited in, *Pan American Health Organization tobacco or health: status in the Americas* Washington, DC, Pan American Health Organization. 1992. (Scientific Publication No.536).
- 11 **Aono H,** Ozawa H, Bello MC, et al. Prevalence of risk factors for coronary heart disease among Dominicans in the Dominican Republic: comparison with Japanese and Americans using existing data. *J Epidemiol* 1997;**7**:238–43.
- 12 **Vincent AL,** Bradham DD, Rojas CAU, et al. The Dominican Republic and the Marlboro brand: a cigarette smoking survey and status report. *Bulletin of PAHO* 1993;**27**:370–81.
- 13 **Corrao MA,** Guindon GE, Sharma N, Shokoohi DF, eds. *Tobacco control country profiles.* Atlanta, Georgia: American Cancer Society, 2000.
- 14 **Nichter M.** Smoking: what's culture got to do with it? *Addiction* 2000;**98**(suppl 1):39–145.
- 15 **Unger JB,** Cruz T, Shakib S, et al. Exploring the cultural context of tobacco use: a transdisciplinary framework. *Nicotine Tob Res* 2003;**5**(suppl 1):S101–17.
- 16 **Warner KE.** The role of research in international tobacco control. *Am J Public Health* 2005;**95**:976–84.
- 17 **Beebe J.** Basic concepts and technique of rapid appraisal. *Hum Org* 1995;**54**:42–51.
- 18 **Devers K,** Frankel R. Study design in qualitative research – 2: sampling and data collection strategies. *Educ Health* 2000;**13**:263–71.
- 19 **Jago K,** Edwards R, Mugusi F, et al. Tobacco smoking in Tanzania, East Africa; population based smoking prevalence using expired alveolar carbon monoxide as a validation tool. *Tob Control* 2002;**11**:210–14.
- 20 **Shah SMA,** Arif AA, Delclos G, et al. Prevalence and correlates of smoking on the roof of the world. *Tob Control* 2001;**10**:e1–4.
- 21 **Jha P,** Chaloupka FJ, eds. *Curbing the epidemic: governments and the economics of tobacco control.* Washington, DC: The World Bank, 1999.
- 22 **Larabie LC.** To what extent do smokers plan quit attempts? *Tob Control* 2005;**14**:425–8.
- 23 **Wagner J,** Burg M, Sirois B. Social support and the transtheoretical model: relationship of social support to smoking cessation stage, decisional balance, process use, and temptation. *Addict Behav* 2004;**29**:1039–43.
- 24 **Grotvedt L,** Stavem K. Association between age, gender and reasons for smoking cessation. *Scand J Public Health* 2005;**33**:72–6.