SSM -Population Health 1 (2015) 26–31

Contents lists available at ScienceDirect

SSM -Population Health

journal homepage: www.elsevier.com/locate/ssmph

Article

Assessing the relationship between dental appearance and the potential for discrimination in Ontario, Canada

Jamie Moeller*, Sonica Singhal, Mahmoud Al-Dajani, Noha Gomaa, Carlos Quiñonez

Discipline of Dental Public Health, Faculty of Dentistry, University of Toronto, 124 Edward Street, Toronto, Ontario, Canada M5G 1G6

ARTICLE INFO

Article history:
Received 20 August 2015
Received in revised form
20 October 2015
Accepted 2 November 2015

Keywords:
Ontario
Dentistry
Discrimination
Poverty
Health inequalities
Dental appearance

ABSTRACT

Poor oral health is influenced by a variety of individual and structural factors. It disproportionately impacts socially marginalized people, and has implications for how one is perceived by others. This study assesses the degree to which residents of Canada's most populated province, Ontario, recognize income-related oral health inequalities and the degree to which Ontarians blame the poor for these differences in health, thus providing an indirect assessment of the potential for prejudicial treatment of the poor for having bad teeth. Data were used from a provincially representative survey conducted in Ontario, Canada in 2010 (n=2006). The survey asked participants questions about fifteen specific conditions (e.g. dental decay, heart disease, cancer) for which inequalities have been described in Ontario, and whether participants agreed or disagreed with various statements asserting blame for differences in health between social groups. Binary logistic regression was used to determine whether assertions of blame for differences in health are related to perceptions of oral health conditions. Oral health conditions are more commonly perceived as a problem of the poor when compared to other diseases and conditions. Among those who recognize that oral conditions more commonly affect the poor, particular socioeconomic and demographic characteristics predict the blaming of the poor for these differences in health, including sex, age, education, income, and political voting intention. Social and economic gradients exist in the recognition of, and blame for, oral health conditions among the poor, suggesting a potential for discrimination amongst socially marginalized groups relative to dental appearance. Expanding and improving programs that are targeted at improving the oral and dental health of the poor may create a context that mitigates discrimination.

1. Introduction

Income-related health inequalities between the rich and the poor are a well-established phenomenon, in which the poor experience higher rates of heart disease (Bierman, Jaakkimainen & Abramson, 2009), cancer (Krzyzanowska, Barbera & Elit, 2009), lung diseases (Adler, 1993), obesity (Phipps & Lethbridge, 2006), diabetes (Booth, Lipscombe & Bhattacharyya, 2010), and mental health disorders (Government of Canada, 2006). These inequalities also occur for several oral health-related conditions and diseases, as well, such as tooth decay, stained and broken teeth, and missing teeth (Sadeghi, Manson & Quiñonez, 2012). A variety of social and economic factors – commonly referred to as the social determinants of health (SDOH) – have been identified as playing primary roles in establishing and propagating these health inequalities between the rich and the poor. These factors include income inequality, lower levels of education, less job security, poorer employment and working conditions, compromised early childhood development, and inadequate access to housing, among other elements (Mikkonen & Raphael, 2010). In fact, individual oral health behaviours are estimated to explain as little as ten per cent of oral health inequalities between the rich and the poor, with an individual's socioeconomic status and access to oral health care instead serving as the primary forces driving income-related oral health inequalities (Ramraj, Sadeghi, Lawrence, Dempster & Quiñonez, 2013). To be sure, broad social pressures play a significant role in driving oral health inequalities, which in turn contribute to differences in dental appearance between the rich and the poor.

Importantly, biases towards individuals on the basis of appearance are well-documented. Dion et al., for example, demonstrated that individuals who are physically attractive are immediately attributed other qualities, such as likeability, friendliness, happiness, modesty, intelligence, and general life success (Dion, Berscheid & Walster, 1972; Montero et al., 2014). More recent studies have also supported these findings in a variety of

* Corresponding author. Tel.: +1 647 453 0769; fax: +1 416 979 4936.
E-mail address: jamie.moeller@mail.utoronto.ca (J. Moeller).

http://dx.doi.org/10.1016/j.ssmph.2015.11.001

other settings (Frieze, Olson & Russell, 1991; Mazzella & Feingold, 1994; Khalid & Quiñonez, 2015). Given that North American society associates straight, white teeth with physical attractiveness (Khalid & Quiñonez, 2015), studies have similarly identified biases about personal qualities for those who are perceived by others to have poor oral health on the basis of dental appearance. These biases relate to qualities that include reliability, cleanliness, sociability, intelligence, and better psychosocial stability (Kershaw, Newton & Williams, 2008; Williams et al., 2006; Newton, Prabhu & Robinson, 2003; Duvernay, Srinivasan & Legrand, 2014). These prejudices can manifest as discriminatory practices that further complicate individuals' lives: social exclusion (Eli, Bar-Tat & Kostovetzki, 2001), more difficulty securing employment or living arrangements (Glied & Neidell, 2008; Singhal, Correa & Quiñonez, 2013), and perversely, disinclination by health professionals to provide treatment and even accept these individuals as new patients (Bedos, Loignon, Landry, Allison & Richard, 2013; Bedos, Loignon, Landry, Richard & Allison, 2014; Loignon, Landry, Allison, Richard & Bedos, 2013).

Indeed, recent qualitative studies support the idea that discrimination exists against the poor in Canada for their poor oral health (Bedos, Levine & Brodeur, 2009; Ravitch & Riggan, 2012; Shankardass, Lofters, Kirst & Quiñonez, 2012; Vallittu, Vallittu & Lassila, 1996). Our study attempts to assess this relationship in Ontario, Canada's most populated province, by: first, studying the degree to which Ontarians recognize income-related oral health inequalities relative to other general health inequalities; second, examine the degree to which Ontarians blame the poor for these differences in health; and third, identify, amongst those who recognize bad teeth as a condition of the poor, which socioeconomic groups are most likely to blame the poor for these differences in health – and by doing so, provide an indirect assessment of the potential for prejudicial treatment or discrimination of the poor for having bad teeth.

2. Materials and Methods

2.1. Conceptual Framework

Our conceptual framework uses a working hypothesis model (Ravitch & Riggan, 2012) to approximate peoples' potential to discriminate against the poor on the basis of dental appearance by linking peoples' perceptions of the poor having bad teeth, with peoples' perceptions of why the poor would be in such a position in the first place. If we can show that people readily perceive the poor as having bad teeth (more so than other health conditions), and we can show that certain groups of people attribute blame to the poor for having such conditions, there is an indirect argument to be made in regards to the potential for discrimination. To be sure, if someone is primed to easily recognize bad teeth as a problem of poverty, and if they are also primed to blame the poor for their social situation, there is the potential for prejudicial treatment of the poor for having bad teeth (Fig. 1).

2.2. Data Source

The data used for this analysis were gathered in 2010 from 2,006 Ontarians aged 18 years and over through a telephone interview survey using random digit dialing. The market-based research firm contracted to conduct the survey used a random sampling of landline telephone numbers in Ontario, and was required to meet quotas in terms of sex, age, and location. No personal identifiers were collected, surveys were conducted in English, and agreement to participate the survey was taken as consent. The data were weighted to achieve a representative sample of the Ontario population according to 2006 Canadian Census data, in terms of the population's age, sex, and location. The study was approved by the University of Toronto's Health Sciences Research Ethics Board (Protocol Reference No. 25583).

2.3. Variables and Data Analysis

This analysis focuses on two broad categories of questions which were asked to participants: (1) awareness of income-related health inequalities; and (2) attributions for the causes of these inequalities. With respect to the first category, participants were asked to agree or disagree with statements suggesting that the rich were less likely than the poor to suffer from fifteen health conditions or diseases for which income-related inequalities have been described (Table 1), including three oral health conditions: tooth decay, stained and broken teeth, and missing teeth. For the second category, participants were presented with two statements framed around blaming the poor for health inequalities (Table 2). For these statements, participants were presented with the response options of strongly agree, agree, disagree, strongly disagree, or neither agree nor disagree. These responses were dichotomized in our analysis to "agree" (strongly agree and agree)

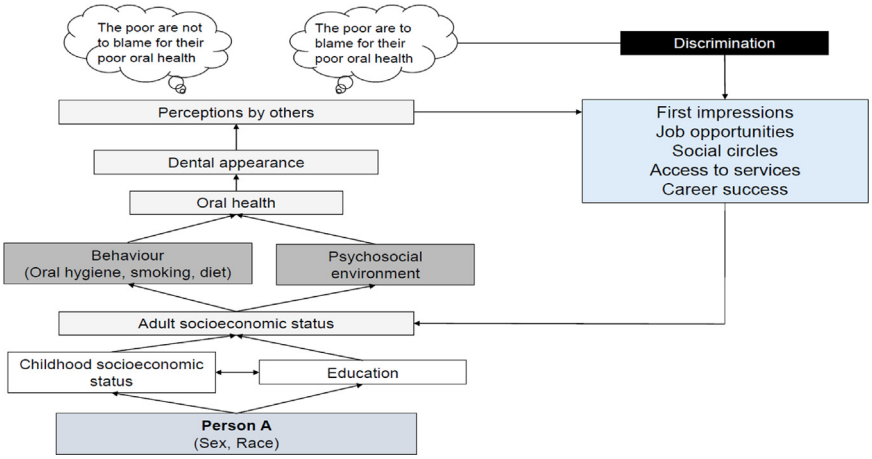

Fig. 1. Conceptual framework illustrating a pathway in which Person A's oral health is influenced primarily by factors that are socially and culturally constructed (see Ben-Shlomo and Kuh (2002) for the life-course approach to epidemiology). However, others perceive individual responsibility as the primary force driving poor oral health, and based on perceptions of dental appearance, blames Person A for their deviations from ideal dental health. This discrimination can manifest itself in a variety of outcomes, which in turn, can play an important role in shaping Person A's socioeconomic status.