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Abstract

In the last 20 years, the United States has made stunning progress reducing the rate of adult smoking. However, the smallest reduction is among older adults. Compared to younger smokers, older smokers are more likely to be lower socioeconomic status (SES), have several tobacco related comorbidities, and are less likely to be treated for tobacco addiction yet, in tobacco policy, they are not considered a marginalized group. The tobacco industry's interest in older smokers contrasts with the lack of interest shown by tobacco control. A double whammy is a set of two bad events or situations that have an effect at the same time. The purposes of this article are to use the health disparity paradigm to (a) discuss the “double whammy” of marginalization by tobacco control and valuation by the tobacco industry on the health of older smokers and (b) provide strategies to promote health equity for older smokers.

Keywords

older smokers, health disparities, tobacco industry, conflict of interest, vulnerable population

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In the last 20 years, the United States has made stunning progress reducing the rate of adult smoking; smoking prevalence dropped from 23% in 2000 to 15% in 2015 (Jamal et al., 2016). However, the smallest smoking prevalence reduction was among adults 45 years and older, and there has been no change for those 65 years and older (Jamal et al., 2016). Between 2000 and 2015, past-year cigarette smoking quit attempts increased for adults younger than 45, whereas for smokers older than 45, there was a decrease in both past-year quit attempts and successes (Babb, 2017).

Numerous factors are relevant to the context of cessation for smokers of any age, including interpersonal characteristics and dynamics (Whitson, Heflin, & Burchett, 2006), social and policy contexts (The Center for Social Gerontology, 2006), access or lack thereof to cessation resources and the level of support of health care providers (Brown et al., 2004; Buckland & Connolly, 2005; Maguire, Ryan, & Kelly, 2000). In addition, research shows that tobacco industry activity affects the contexts of tobacco use among many marginalized and vulnerable groups, including African Americans (Yerger & Malone, 2002), Asian Americans (Muggli, Pollay, Lew, & Joseph, 2002), Latinos (Bialous, 2003), gays and lesbians (Smith & Malone, 2003), homeless and mentally ill persons, (Apollonio & Malone, 2005) and more recently, older adults (Cataldo & Malone, 2008).

Health disparities are defined as systematic, plausibly avoidable health differences according to race/ethnicity, skin color, religion, or nationality; socioeconomic resources or position; gender, sexual orientation, gender identity; geography, disability, illness; age, or other characteristics associated with discrimination or marginalization (Braveman, 2014). Health disparities are the result of avoidable differences between populations that affect the least powerful or marginalized groups in society. They are derived from a pattern of health determinants, outcomes, and resources associated with broader social inequities. When patterns of social exclusion, blocked opportunities, or unequal returns on effort are common to a population, the resulting differences in health status and health care are not equitable (Wallace, 2012).

In tobacco control, there is wide recognition that tobacco use is dominated by marginalized groups such as lower socioeconomic, racial minority, homeless, and mentally ill groups (Passey & Bonevski, 2014) however, older age is not included in the discourse on health disparities. When compared with younger smokers, older smokers are more likely to be non-White, lower socioeconomic status (SES), have a mental illness, have several comorbidities and at least one disability (Schoeni, Martin, Andreski, & Freedman, 2005), yet, they are not considered a marginalized group (Cataldo, Hunter, Petersen, & Sheon, 2015; Dawel & Antsey, 2011). In addition, older smokers

are less likely than younger smokers to believe illness is a consequence of smoking (Kulak & LaValley, 2018; Orleans, Jepson, Resch, & Rimer, 1994; Poland et al., 2000), are more likely to blame themselves for their smoking behaviors, and are less likely to be treated for tobacco use (Doescher & Saver, 2000; Ellerbeck, Ahluwalia, Jolicoeur, Gladden, & Mosier, 2001; Houston et al., 2005). Common health myths related to older smokers have contributed to their vulnerability, myths such as smoking is a choice rather than an addiction (Balbach, Smith, & Malone, 2006), “low tar” cigarettes (used by more older than younger smokers) are “less harmful” (Hamilton et al., 2004; Shiffman, Pillitteri, Burton, Rohay, & Gitchell, 2001), and quitting at older ages is futile or even harmful (Cataldo, 2007; Smith, 2007). Research findings indicate that the origins of many of these myths can be traced to the tobacco industry (Cataldo, Bero, & Malone, 2010).

A double whammy is a set of two bad events or situations that have an effect at the same time (Double Whammy, 2019). The purposes of this article are to use the health disparity paradigm to (a) discuss the “double whammy” of marginalization by tobacco control and valuation by the tobacco industry on the health of older smokers and (b) provide strategies to promote health equity for older smokers.

Older Smokers: Marginalized by Tobacco Control

By 2030, older adults will account for 21% of the U.S. population (Vincent & Velkoff, 2010). For the purposes of this article, older adults consist of two groups, 45 to 64 years and ≥ 65 years. Currently, older adults have the highest percentage of people who smoke; about 18% of all people between 45 and 64 years and about 9% of everyone ≥ 65 years (Jamal et al., 2018).

Tobacco-related diseases are the leading cause of death for adults ages 45 to 64 years, the top three causes of death are heart disease, cancer, and cerebrovascular (CVD) and for persons ≥ 65 years, the top seven diseases are cardiac disease, cancer, CVD, pneumonia, and flu and chronic obstructive pulmonary disease (COPD; in that order; Centers for Disease Control and Prevention [CDC], 2017). Over 70% of all deaths related to smoking happen to people over 60 years old (Jamal et al., 2018). Although millions of people across all age groups smoke, it is older adults who suffer the consequences.

According to the CDC, health equity in tobacco prevention and control is the opportunity for all people to live a healthy, tobacco-free life, regardless of their race, level of education, gender, sexual orientation, employment status, geographic location, or health status (Centers for Disease Control and Prevention, 2014). Yet, older smokers are often ignored in tobacco control discussions of marginalized groups most affected by tobacco. To achieve true

health equity for older smokers, older age needs to be included in the list of groups that tobacco control considers marginalized.

In the United States older smokers account for the greatest tobacco-related morbidity and mortality and subsequent health care costs (Andrews, Heath, & Graham-Garcia, 2004; Kulak & LaValley, 2018). Older smokers are at greater risk of nicotine interactions, namely, increased drug metabolism (Kulak & LaValley, 2018). As a result, blood levels of drugs commonly used by older adults are lowered (e.g., beta blockers; Andrews et al., 2004). Smoking cessation is beneficial at all ages, even in the frail elderly; decreasing cancer, cardiovascular disease, overall morbidity and mortality, and increasing quality of life (Burns, 2000; Gellert, Schöttker, & Brenner, 2012; Nash, Liao, Harris, & Freedman, 2017; Olfson, Wall, Liu, Schoenbaum, & Blanco, 2018; Vincent & Velkoff, 2010). However, when compared with other age groups, adults aged 45 years and older do not have an equivalent decrease in their smoking prevalence over time (U.S. Department of Health and Human Services, 2014).

There are fundamental differences between younger and older smokers: Older smokers are less nicotine-dependent, less likely to report a cessation attempt, less likely to seek help from their clinicians and are less likely than younger smokers to be referred for cessation support (Jordan et al., 2017). Additional barriers to smoking cessation for older smokers include more years of smoking, low self-efficacy around quitting, lack of perceived smoking-related health risks, and/or lack of supportive resources (Andrews et al., 2004; Kulak & LaValley, 2018). However, when older smokers do attempt cessation, they are more likely than younger smokers to succeed and less likely to relapse (Cummings, Hyland, Bansal, & Giovino, 2004). Older smokers are the age group most likely to be affected by tobacco-related disease and disability and concurrently, clinicians are less likely to advise older patients to stop smoking in a hospital setting and less likely to prescribe smoking cessation medications to those over 60 years old (Jordan et al., 2017). In primary care, older patients who smoke are less likely than younger patients to receive advice to quit (Maguire et al., 2000; Schmitt, Tsoh, Dowling, & Hall, 2005; Tait et al., 2007). Yet, tobacco control does not consider older smokers to be a marginalized or vulnerable population.

If older smokers were included in the tobacco control health equity paradigm (i.e., considered a marginalized or vulnerable population), the additional attention and perhaps funding to follow, could close the gap between smoking prevalence rates over time for older and younger smokers.

Older Smokers: Valued by the Tobacco Industry

Although older smokers are not a priority for tobacco control or some health care providers, the tobacco industry has always valued older smokers because they are heavy smokers and loyal to the brands they smoke (Cataldo & Malone, 2008). To keep older smokers smoking, the tobacco industry aggressively used targeted marketing, developed products to address their health concerns, and negatively influenced science on smoking and health.

Strategic Marketing to Older Smokers

Although highly valued, the industry was aware that this was the age group that began to experience the health effects of smoking and express their desire to quit and/or to find a “healthier way to smoke” (Cataldo & Malone, 2008). The tobacco industry has long claimed that smoking is a “choice” (Balbach et al., 2006). However, there is evidence that they sought to thwart the “choice” of older smokers who wanted to quit smoking, they used direct mail couponing on the same weeks that older smokers received their pension checks and provided sponsorship of cigarettes at events popular with older smokers (e.g., senior conventions and clubs, bingo games, PGA Senior Golf Tour) and provided free cigarettes to nursing homes (Cataldo & Malone, 2008).

Development of Products to Keep Older Smokers Smoking

The most successful products developed for health-conscious older smokers were “light” and “low tar” cigarettes, despite industry knowledge that such products had no health advantage and did not help smokers quit (Cataldo & Malone, 2008). In 2006, major U.S. tobacco companies were convicted in federal court of fraud and racketeering. The presiding judge concluded, “. . . Defendants falsely marketed and promoted low tar/light cigarettes as less harmful than full-flavor cigarettes to keep people smoking and sustain corporate revenues” (Tobacco Control Legal Consortium, 2006).

Tobacco Industry Influence on Science Related to Health of Older Smokers

There is strong evidence that industry-sponsored research is more likely to reach conclusions that are favorable to the sponsor (Bekelman, Li, & Gross, 2003). Three examples of tobacco industry efforts to influence science related to aging, smoking, and health are as follows:

1. *The tobacco industry funded the Framingham Health Study (FHS):* The FHS is the gold standard for epidemiology research and provided early findings about the causes of chronic heart disease (CHD). In the early 1970s, the tobacco industry provided funding with a secret agenda to obtain full access to FHS data to control all analyses and reports related to smoking (Cataldo, Bero, & Malone, 2010). By 1976, the tobacco industry had obtained all of the FHS data, Dr. Dawber, the legitimate FHS scientist was fired and Carl C. Seltzer, a longtime paid tobacco industry consultant (SourceWatch, 2019) reanalyzed the data to suggest that tobacco-related morbidity and mortality primarily resulted from “constitutional” factors or genetic factors such as age/ethnicity, and *not smoking*. PR firms were used to flood the scientific and lay literature with the “constitutional hypothesis”; this halted the dissemination of information about the causal link between smoking and CHD for at least 10 years (Cataldo, Bero, & Malone, 2010).
2. *The tobacco industry used the FHS data to create controversy and myths about the cardiac health of older smokers.* Three myths perpetrated by Carl C. Seltzer in the 1970s are still believed today by both smokers and clinicians (Cataldo, 2007): *Myth 1: It is too late to quit, the damage is done;* “smokers aged 65 or older might as well not quit the habit because to stop smoking does not prolong lives at that stage . . .” (Radio TV Reports, 1972). *Facts:* Most older smokers want to quit, and people over 65 years who smoke are more likely to be successful at quitting (Abdullah et al., 2006; Chen & Wu, 2015). Smokers over the age of 65 years who smoked less than 32 “pack years” and gave up smoking 15 or fewer years ago, lower their risks of dying from heart failure, heart attacks and strokes to the same level as never smokers (Ahmed et al., 2015). *Myth 2: Leave them alone it is their last joy in life;* “there seems to be no good reason why older smokers should be denied this small pleasure in the last years of life” (Radio TV Reports, 1972). *Facts:* Benefits of smoking cessation in the elderly include reduced progression of respiratory disease and improvement in lung function, improved safety and quality and length of life, decreased cognitive impairment and prevention of dementia (Anstey, von Sanden, Salim, & O’Kearney, 2007; Bernhard, Moser, Backovic, & Wick, 2007; Olsson et al., 2018); and reduced risk of all major causes of death (Schmitt et al., 2005). *Myth 3: After the age of 65, smoking cessation would not make a difference for cardiac risk;* “Among elderly people, the risk of CHD is essentially the same with persistence of cigarette smoking than with its cessation” (Seltzer,

- 1975). *Facts*: Previous smokers are able to reduce their heart risk in less than 15 years (median 8 years) after quitting (Ahmed et al., 2015).
3. *The tobacco industry influenced the science on Alzheimer's disease (AD) and smoking*: Until recently, despite strong evidence linking smoking with AD, beliefs prevailed that smoking protects against AD (Cataldo, Prochaska, & Glantz, 2010). A 2010 meta-analysis of 43 studies, examined the relationship between smoking and AD, after controlling for tobacco industry affiliation of the authors. Analysis revealed that eight case control studies with tobacco industry affiliation yielded a significant pooled odds ratio of 0.86 (95% confidence interval [CI] = [0.75, 0.98]) suggesting that smoking protects against AD. In contrast, the average risk of AD for cohort studies without tobacco industry affiliation, was $1.72 + 0.19$ ($p < .005$), showing that smoking almost doubles the risk for AD.

Promotion of Health Equity for Older Smokers Through Policy, Research, and Practice

Tobacco use in the United States is increasingly dominated by marginalized groups who experience the greatest social and economic disadvantage. Compared to the general population, older smokers are more likely to be non-White, lower SES, and have a disability, mental illness, or substance abuse disorder (Cataldo et al., 2015; Dawel & Antsey, 2011). The number of persons in the United States aged 65 years or older is expected to be more than double between 2010 and 2050, an increase of 40.2 million to over 88 million (Kleykamp & Heishman, 2011). As the U.S. population ages, the racial and ethnic composition of older adults (≥ 65 years old) is also expected to change. In 2050, this group is projected to be 77% White, a decrease of 10% since 2010 and 12% Black, an increase of 3% (Vincent & Velkoff, 2010). These projections suggest that even if the proportion of older smokers remains the same, the absolute number of older smokers could increase substantially (Kleykamp & Heishman, 2011). Out of all age groups, the burden of tobacco-related disease and impairment is greatest for older adults, yet, this population is often excluded from tobacco control efforts.

Tobacco Control Policies and Programs

Comprehensive tobacco prevention and control efforts have been effective in reducing tobacco use in the general population (i.e., smoke-free air laws, tobacco taxation, mass media campaigns, and making evidence-based cessation treatments available; Garrett, Dube, Babb, & McAfee, 2014). To achieve

health equity in tobacco control, these programs need to identify and eliminate tobacco-related disparities among population groups (Garrett et al., 2014). Tobacco control efforts have not reached all vulnerable populations (e.g., older smokers) resulting in the exacerbation of disparities in tobacco use. Tobacco control policies and programs have been implemented in a way that they have not affected older adults, and this has possibly contributed to the stalled prevalence of smoking among older adults. An example is the limited funding opportunities available for issues related to older smokers because they are not considered a vulnerable population.

Because tobacco control policies take a population-based approach to improving health, policies have the potential to reach older smokers and reduce disparities. One example is cigarette pricing, studies have shown an inverse association between cigarette price and the prevalence of smoking in older adults. One study found that higher cigarette prices were positively associated with smoking cessation (Pullen, 2017). These new findings suggest that because of the fixed incomes of most older adults, cigarette taxes can join smoke-free air laws as effective tools with which to promote smoking cessation among older, long-term smokers. Because higher cigarette prices promote smoking cessation, clinicians should support efforts to increase state taxes on cigarettes (Pullen, 2017). Another policy that has the potential to impact older adults is related to warning labels. Older smokers see current warning labels and antismoking messages as ineffective for motivation to stop smoking. Negative messages are described as easy to ignore, and some trigger urges to smoke (Cataldo et al., 2015). Older smokers are already knowledgeable about the risks and health effects of smoking; however, they tend to be less knowledgeable about the benefits of cessation and may underestimate their ability to quit. Research findings indicate that positive and instructive antismoking messages need to be used to reach older smokers (Cataldo et al., 2015). Public messages with a positive frame that outline immediate and long-term benefits of cessation could be an effective approach for long-term smokers.

Tobacco control activities must expand beyond schools and youth focused venues, they need to include senior community centers, senior residences, senior-oriented public transportation, public bus stops, geriatrician outpatient practices, hospitals, and nursing homes. Residential and nonresidential facilities for older adults (e.g., nursing homes, senior centers) are well-positioned to support tobacco cessation. A recent survey conducted by the National Council on Aging assessed 950 senior centers' role in improving the health of their members. The reports indicate senior centers provide health programming on a variety of topics relevant to older adults; however, few senior centers mentions the provision of a smoking cessation program

(National Council on Aging, 2016). Nursing homes have the potential to provide tobacco education and cessation assistance and could provide Medicare education as it pertains to smoking cessation, as older adults may not realize this is an included benefit (Watt, Lassiter, Boyle, Kulak, & Ossip-Klein, 2009). Medicare covers lung cancer screening (once every 12 months) and smoking/ tobacco cessation (up to eight visits per year; Fox & Shaw, 2015). Residential and nonresidential facilities' inclusion of cessation programs and related education support the missions of the facilities to support older adults' health and wellness (Watt et al., 2009), yet, this is an area of missed opportunity. Future research needs to formally assess the implementation and effectiveness of such programing.

Tobacco Control Research

Because of population shifts in age, changing health care coverage, and developmental differences between older and younger adults that affect tobacco addiction treatment, older adults need to be a research priority. The lack of focus on older adults by tobacco control and the subsequent lack of funds available to investigate issues pertinent to older smokers has resulted in a lack of evidence-based smoking cessation interventions for older adults (Chen & Wu, 2015; Zbikowski, Magnusson, Pockey, Tindle, & Weaver, 2012). This is a critical knowledge gap, older smokers are at greatest risk of smoking-related morbidity and mortality (Zbikowski et al., 2012). In one of the few recent studies, older smokers were compared to those younger, and the findings showed that older smokers were misinformed about the role of nicotine in smoking, more likely to agree that smoking is "something basic about a person that can't be changed," and less likely to access a telephone or Internet quitline (Kulak & LaValley, 2018). Quitlines have been found to be effective, yet, because of a lack of awareness they are underutilized by older smokers (Kulak & LaValley, 2018). A recent meta-analysis on the few smoking cessation interventions targeting adults over 50 years old, indicates successful tobacco cessation interventions are multimodal (Chen & Wu, 2015). The highest abstinence rates are among those interventions that were delivered face-to-face and provided biochemical verification of tobacco cessation (Chen & Wu, 2015). However, in most studies, treatment effects were of short duration, and absolute quit rates were low, leaving the vast majority of older smokers at high risk of smoking-related health conditions. There is a need for additional research to design and test future interventions specifically tailored for older smokers (Zbikowski et al., 2012). Both laboratory and clinical research with a focus on older smokers are needed to provide the evidence that will help them succeed with cessation and live longer and healthier lives.

Evidence-Based Practice for Tobacco Addiction

As the population ages, all practitioners must make smoking cessation a priority for older patients' care. Better understanding the industry's influence on the context of cessation attempts may make these efforts more likely to succeed. Practitioners need to be educated about the tobacco industry influence on the health of older smokers; they need to recognize that the industry's efforts to retain older smokers affects both their patients' behavior and the context of cessation counseling. Receiving marketing materials by mail, for example, may deter smokers from quitting and should be addressed in anticipatory guidance (Cataldo & Malone, 2008). Educating older smokers about the tobacco industry's influence on smoking behaviors may affect self-blame; a documented barrier to cessation (Chapman, 2002). Informing practitioners about industry influence may decrease their tendency to "blame the victim" (Chapman, 2002; Gunderman, 2000) thereby increasing the likelihood that they recommend tobacco addiction treatment for older adults. Informing older smokers, especially those using low-tar cigarettes, of the role that the tobacco industry had in maintaining their tobacco addiction, emphasizing the level of risk and the health benefits of quitting even in later life, and informing older smokers that low-tar cigarettes confer no reduction in harm and may even make quitting more difficult, should be part of cessation counseling for this population.

Most of the focus on causes of health inequities among older adults has focused on acute care, which has its greatest impact on health outcomes after a person becomes ill. But prevention of illness and disability has the greatest potential for reducing health inequities, and reducing the need for expensive medical care (Wallace, 2012). Because exposures to many risk factors for disease and disability are unequally distributed across groups, it is important to address social and political factors. Heart disease is the leading cause of death in old age for all groups and there are clear differences in cardiovascular disease rates by income and race or ethnicity. Policy efforts to reduce smoking and improve smoking cessation rates among older adults is one cost-effective approach for reducing cardiovascular disease at the population level (Morrison & Ness, 2011).

As tobacco control advocates health care providers, we must make it a priority to reduce smoking prevalence in population groups with the greatest burden of tobacco use and smoking-related diseases, older smokers are one such group. Additional tobacco control efforts and resources need to be directed toward the health of this at-risk group.


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