Impact of Second Hand Smoke on Children’s Health Worldwide and in Pakistan

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Tobacco industry is among the biggest cash crops of developed and developing economies. In Americas the biggest cash crop is corn yielding $30 worth of corn per acre in volume but the highest revenue yielding is tobacco yielding $1500 per hectare. The biggest players of the industry are Philip Morris International (PM), British American Tobacco (BAT), Altria and China National Tobacco their product line ranges from Cigarettes, Cigars, to Pipe tobacco.

British American Tobacco (BAT) established Pakistan Tobacco Co. (PTC) in 1947 and the presence of transnational tobacco industry in Pakistan is over 60 years, the biggest players in tobacco industry of Pakistan are Philip Morris International (PM) and British American Tobacco (BAT). Tobacco companies of Pakistan are among the biggest cash crops contributing about 40% of all excise duty and 10% of all the government revenue. Apart from being the biggest cash crops for economies, tobacco industry is one of the biggest health threats for the public that the world has ever suffered. Six million people die each year because of direct active smoking while over six hundred thousand deaths are recorded in result of non-smokers exposed to smoking. The Smoking trend is increasing in low income countries like Pakistan, India and Iran. Smoking trend in low or middle income countries is around 80% and by 2030 the annual death toll in result of smoking can reach up to eight million deaths (WHO, 2013) and as far as the rules and regulations go only 16% of world’s populations is protected by Smoke Free laws. In Pakistan around 40% of male population and 8% of female population are regular or active smokers, 50% of Pakistani households have at least one smoker and this number is drastically on a rise and about 1200 Pakistani children from age 6 to 15 adds up to increasing trend of smoking where 51% of Pakistani children do not have enough to eat and are underweight, this trend of rise in smokers kills almost 274 people everyday (PHE, 1999)
cancer, cardiovascular, respiratory, reproductive disorder (primarily in woman) and hormonal disorders are common diseases of regular smokers, a normal cigarette contains over 4000 chemicals of which 69 are highly toxic. Pakistani youth is increasingly coming under this potential death trap where smoking is becoming more of a habit and fashion than addiction one of such trends is Sheesha, another type of piped smoke is considered to be equal to 200-300 cigarettes in its one hour long session, which is easily available to teenagers and underage potential users of cigarettes. It also has a high number of female consumers and is easily available to all without any age restriction even in public places. Active smokers are not only playing with their lives but putting other lives in danger too who are exposed to their smoke which is called passive smoking, involuntarily smoking, environmental tobacco smoke (ETS) or second hand smoke (SHS).

Purpose of this study is to know that what is second hand smoke (SHS) and what are its effects on the health of children who are exposed to it, as in Pakistan over 50% households have at least one smoker. Inhaling other people exhaled smoke through smoke filled environment involuntarily is called passive or second hand smoke (SHS), effects of second hand smoke are as same as the person who smokes actively. Hydrogen cyanide, benzene and Carbon monoxide are among the deadly chemicals that effects even the second hand smokers (SHS) as bad as active smokers (Surgeon General Report, 2006). The death toll in US because of second hand smoke (SHS) is nearly around 50,000 and about 126 million people are exposed to passive smoking an estimated 3,000 deaths are recorded from lung cancer because of passive smoking and 46,000 deaths because of heart disease each year is because of exposure to passive smoking.

Children are much more immune to Second hand smoke (SHS) as they are still at their physical developing stage and they breathe more air than adults and more vulnerable as they have less control over their environment whether indoor or outdoor. In Pakistan alone 70% of children are exposed to second hand smoke (SHS) contributing harm to their indoor environment and capable to produce a range of disease such as lung cancer, heart disease, hormonal disorder etc (AAP, 2013) of which Children between age 13-15 reported that 34% of them are exposed to Second hand smoke (SHS) in outdoor/public places and 27% are exposed indoor/home (The Global Toll of Tobacco, 2011).
(Surgeon General Report, 2006) Sudden death syndrome (SIDS), newborns with weaker lungs, Asthma, Delays in physical development, learning difficulties, neurobehavioral effects, and premature deaths of infants are common among the infants who are exposed to second hand smoke (SHS) and it causes morbidity and mortality in children (RCP, 2010). Tobacco usage is increasing particularly in low income countries and among young adults and causing drastic health issues for active and passive smokers. According to a survey conducted in Pakistan by Global toll of tobacco showed the statistics that 60,000 people die every year by exposure to smoke whether inside or outside.

### Children's Exposure to Second hand smoke in Pakistan

![Bar graph showing children's exposure to second-hand smoke in Pakistan]

### Second Hand Smoke effects on Children's Health

**Effects in developmental phase**
- Fetal Growth: Low birth weight and decrease in birth weight
- Sudden Infant Death Syndrome (SIDS)
- Pre-term delivery

**Respiratory Effects**
- Acute lower respiratory tract infections in children (e.g., bronchitis and pneumonia)
- Asthma induction and exacerbation in children
- Asthma induction and exacerbation in adults
- Chronic respiratory symptoms in children
- Eye and nasal irritation in adults
- Middle ear infections in children

**Carcinogenic Effects**
- Lung cancer
- Nasal sinus cancer

**Cardiovascular Effects**
- Heart disease mortality
- Acute and chronic coronary heart disease morbidity
- Altered vascular properties
World Health Organization (WHO) implemented Framework convention for Tobacco control (FCTC) the first health treaty which was adopted by all 192 members of World Health Organization (WHO) including Pakistan. As a part of treaty Pakistan is obligated to implement the rules and regulations of FCTC program to control and implement the strategies in making the environment smoke free which included complete ban on smoking in public places, educational institutes and offices, to control the advertising and promotion of smoke and the warning labels on cigarette pack and to increase the rate of cigarettes and implementing higher taxes which will ultimately result in decline in volume of smokers.

To overcome the hard rules and regulations of FCTC, Tobacco companies funded number of studies that concluded that Second Hand Smoke (SHS) is not causing all the problems for children as appeared in 2006, Surgeon General Report. The findings of studies funded by Tobacco companies made the results controversial as the results were far different from the results that were carried out by number of other scientific studies. Smoke Free laws are now implemented in number of countries to fight the effects of Second hand smoking (SHS) especially on children as they are the victims. Survey of 15 countries in 2007 approved smoke free laws with percentage of 80.

Smoking should be banned indoor because it puts children’s health and safety on stake as there is no way to minimize the effects of secondhand smoke other than completely ban on smoke in offices, educational institutes and public places. Ethical considerations should be taken as tobacco industry itself is in unethical practices in advertisement of their product aggressively on social media and other mediums because of limitations on their advertising campaigns on national or private channels. Nicotine gums should be brought up in markets with lower prices to help smokers overcome their addictions of smoking. The only way to fully protect the children is to make the environment 100% smoke free this can be done by quitting the smoke by choosing the alternatives to smoke and to raise the taxes on tobacco related products. Tobacco industry should stop its promotional activities whether it is in the shape of Corporate Social Responsibility or their funded research to prove that the second hand smoke is not causing many problems as projected by other scientists. Government should limit the production of tobacco related products and in case of violence proper penalties and fines should be imposed on the company.

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