

Knowledge, Attitudes and Perceptions (KAP) on Point of Sale (PoS) Advertising and Promotion of Tobacco Bans Among Parents: A Cross-Sectional Study in Nur-Sultan, Kazakhstan

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Abstract

In Kazakhstan in 2004, the percent out of all deaths that were due to smoking was 24%, twice the worldwide percent (12.0%) and about 50% higher than the percentages in the Russian Federation and Eurasia as a whole (both 16%). Based on the Global Youth Tobacco Survey (GYTS) among those who visited a point of sale (where products are purchased) in the past 30 days, overall 13.6% (14.3%=boys, 13.0%=girls) noticed tobacco advertisements or promotions. Studies have shown that exposure to Point of Sale (PoS) advertising and promotion of tobacco products is associated with increased youth smoking initiation. Nonetheless, to the best of our knowledge, there are no studies that examine the perceptions and attitudes of the parents of these youth towards PoS Tobacco Advertising Promotion and Sponsorship (TAPS) ban. The study objectives include: (1) determining parents' perceptions of PoS advertising and promotion of tobacco bans; (2) assessing parents' and experts' knowledge on PoS TAPS ban definitions and regulations.

Introduction

Tobacco use is the most preventable cause of death universally, causing over 100 million deaths worldwide in the 20th century (WHO, 2017). In Kazakhstan in 2004, the percent out of all deaths that were due to smoking was 24%, twice the worldwide percentage (12.0%) and about 50% higher than the percentages in the Russian Federation and Eurasia as a whole (both 16%) (GATS Country Report, 2014). In January 2006, Kazakhstan ratified the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC). Thus, like other party countries, have agreed to establish, implement and assess effective tobacco control programs, to measure progress in reaching the goals of the WHO FCTC. Moreover, through the implementation of FCTC Kazakhstan has obliged itself to protect people

from tobacco smoke (The Law of RK on ratification of WHO FCTC, 2006). Later on, in 2009 the Republic of Kazakhstan (RK) adopted a code on the health of the people and the health care system, which contained a comprehensive statement on tobacco control (Article 159) (The Code “On health of people and health care system” 2009).

The Article 13 of the WHO FCTC prohibits tobacco advertising, promotion and sponsorship (TAPS), including with point of sale (PoS) displays. A point of sale concerns any location where tobacco products are displayed, advertised and purchased. PoS consists of not only the final point of purchase (i.e., the register) but also advertising at retail locations (both indoor and outdoor), product display, and price (i.e., tobacco branded cash register, colorful PoS cigar display next to candy) (Lovato et al., 2007). The Article 13 of FCTC recommends a complete advertising ban, within five years of entry into force of FCTC for each party. Currently, of all (181) parties, 72% (131) disclosed having a comprehensive ban on all TAPS. Nonetheless, interpretation of comprehensive ban varies across countries, and do not always include all of the specific standards outlined in the implementation guidelines. In 2018, 60% of all parties included PoS display bans in their extensive ban on TAPS (WHO, 2018).

Point of sale (PoS) promotion is a variation of activities in the retail setting to expand sales of tobacco products. This could include, but not be limited to tobacco advertising signs, branded product giveaways, branded functional items, price discounts and the display of the tobacco products themselves. PoS promotion uses targeted marketing to increase its power by dividing customers into groups and adjusting advertising to attract them. This market segmentation is established upon aspects like consumer or potential consumer demographics, product use, lifestyle or location (Grier and Kumanyika, 2010).

Even though practices differ by region, the tobacco industry is commonly responsible for retail tobacco promotion, providing “power walls” (rows of packaged tobacco product in excessive quantities generally visible in the checkout area) to tobacco vendors and helping with in-store advertising placement (Henriksen, 2012). In India and the United States, tobacco manufacturers pay store owners to demonstrate advertisements (Chaudhry et al., 2007 and Paynter, 2009). In Kazakhstan too some of the store owners confessed about being paid by tobacco manufacturers to display advertisements or install power walls. Tobacco companies persist on targeting areas with a high proportion of youth by selling tobacco products in point of sales near schools and placing tobacco products near candies. Research shows that tobacco advertising both encourages initiation among youth and obstructs cessation in current tobacco users (National Cancer Institute, 2008).

Pack image advertises tobacco branding effectively, children are the most responsive when it comes to tobacco advertising. In both Canada and the United States, more PoS promotion in stores was correlated with either a higher proportion of underage shoppers or proximity to an elementary or secondary school (Henriksen et al., 2004; Schooler et al., 1996, and Cohen et al., 2008). TAPS exposure is associated with higher smoking prevalence rates, especially with initiation and continuation of smoking among adolescents (Saffer and Chaloupka, 2000 and Yang T et al., 2012). Furthermore, exposure to TAPS results in around third youth experimentation with tobacco (Emery et al., 1999). According to global Global Youth Tobacco Survey (GYTS) in 2002, 78% of students aged 13-15 years report being exposed regularly to some form of TAPS (GYTS, 2002). In Kazakhstan GYTS in 2009 showed that 36.3% ever smokers-initiated smoking before age ten (Boys = 42.4%, Girls = 26.9%) (GYTS, 2009). Latest GYTS in Kazakhstan, which was carried out in 2014 indicates that 2.0% percent of boys, 1.3% of girls, overall 1.7% of students aged 13-15 years currently smoked cigarettes. Among those who visited a point of sale in the past 30 days, overall 13.6% (14.3%=boys, 13.0%=girls) noticed tobacco advertisements or promotions (GYTS, 2014).

The majority of studies focus on relationship between youth attitudes and exposure to PoS advertising and promotion of tobacco products and smoking initiation. Strong public support is one of the encouragements of the tobacco control advocacy in the world. It is crucial to understand how to raise public support and awareness for banning PoS displays and recognizing the fundamental factors of public support in the general population. To the best of our knowledge, this is the first study that examines parent's perceptions towards PoS TAPS ban. The present study will help in better understanding perceptions and attitudes of parents regarding PoS TAPS bans. Also, will provide new information on how to support tobacco control advocacy and strengthen government's obligations to implement ban on PoS TAPS. The study has following objectives: (1) determining parents' attitudes and perceptions of PoS advertising and promotion of tobacco bans; (2) assessing parents' knowledge on PoS TAPS ban definitions and regulations.

Materials and methods

15 public schools (12 are located on the right bank and 3 on the left bank of the Ishim River) in Astana those who participated in Big Tobacco, Tiny Target project in May 2018 were randomly selected for this study; 2 schools refused to participate. Parents of middle and high school students (5-11 grades) were recruited to participate in the study. Inclusion criteria required parents to have a child attending one of the 15

schools described above. Ethics approval for data collection was granted by the Nazarbayev University Institutional Research Ethics Committee.

Data collection

Pre-test of the questionnaire was carried out before start of the data collection. All of the comments were taken into account and some of the questions were changed accordingly. Data were obtained through self-administered and anonymous questionnaires. Demographics part of the questionnaire was taken from the Global Adult Tobacco Survey (GATS) which were reviewed and approved by international experts. Students were asked to give questionnaires to one of their parents and bring them back after completion. The questionnaire took 7-10 minutes to complete and included questions on personal smoking behaviors, knowledge on PoS TAPS terminology, and attitudes towards PoS TAPS ban laws, exposure to tobacco advertising and display of tobacco products at PoS in different countries.

Data preparation

Prior to data analysis, cases missing information on the three main outcomes were excluded from the data set. This resulted in a final sample of 514 parents (Table 1).

Table 1. Demographics of respondents (univariate analysis)

	Parents (n=514)
Mean age	41 years
Gender	
Female	67.7%
Male	32.3%
Smoking Status	
Smokers	13%
Non-smokers	75.2%
Smokers in the past	11.8%
Education level	
Low (lower than college/university)	27.5%
High (college/university and higher)	72.5%
Income	
Low (0-150,000 tg)	50.2%
Middle (150,000-300,000 tg)	37.5%
High (>300,000 tg)	12.3%
Nationality	
Kazakh	71.7%
Russian	16.1%
Other	12.2%

Employment	
Government Employee	34.8%
Non-government Employee	27.1%
Self-Employed	24.5%
No job	13.6%

Study Measures

Dependent variables

Attitudes towards display of tobacco products at PoS in Russia. We assessed each participant's attitude towards display of tobacco products at PoS in Russia by asking a question: "would you favor or oppose the following types of prohibition of display of tobacco products?" and providing a picture of partial TAPS ban in Russia. Answers were as follows: "favor", "oppose" and "don't know".

Attitudes towards display of tobacco products at PoS in Norway. We assessed each participant's attitude towards display of tobacco products at PoS in Norway by asking a question: "would you favor or oppose the following types of prohibition of display of tobacco products?" and providing a picture of complete TAPS ban in Norway. Answers were as follows: "favor", "oppose" and "don't know".

Attitudes towards display of tobacco products at PoS in Kazakhstan. We assessed each participant's attitude towards display of tobacco products at PoS in Kazakhstan by asking a question: "would you favor or oppose the display of tobacco products at points of sale at present time?" and providing a picture of current state (no ban) of TAPS at PoS in Kazakhstan. Answers were as follows: "favor", "oppose" and "don't know".

Independent variables

Smoking status. We assessed participants' smoking status by asking a question: "What is your smoking status?" The options for the answers were: "I have never smoked", "I have smoked in the past" and "I am a smoker/ I smoke now".

Attitudes towards PoS TAPS bans. We assessed participants' attitudes towards PoS TAPS ban by asking a question: "Are you in favor of Point of Sale (PoS) advertising and promotion of tobacco bans?" The options for the answers were: "yes", "no" and "don't know".

Perceptions on PoS tobacco displays and adolescent motivation to smoke. We assessed whether participants thought that PoS tobacco displays motivated adolescents to smoke by asking a question: "Do you think tobacco point of sale

displays (at stores, kiosks, shopping malls etc.) motivate young people to smoke?" The options for the answers were: "yes", "no" and "don't know".

Perceptions on PoS tobacco displays as advertisements. We assessed whether or not participants perceived on PoS tobacco displays as advertisements by asking a question: "Do you think PoS displays are advertisements?" The options for the answers were: "yes", "no" and "don't know".

Attitudes towards children's exposure to tobacco products at PoS. We assessed participants' attitudes towards children's exposure to tobacco products at PoS by asking a question: "How do you feel about children being exposed to display of tobacco products at points of sale?" The options for the answers were: "positive", "negative" and "neutral".

Concern of exposure level to tobacco products at PoS. We assessed participants' concern towards their own children's level of exposure to tobacco products at PoS by asking a question: "How important is the level of exposure to display of tobacco products at the point of sale to your child for you?" The options for the answers were in a likert scale: "not important", "somewhat important", "very important" and "essential".

Statistical Analyses

Frequency counts were computed for the demographic variables of the respondents including sex, age, education level, employment and smoking status, income and nationality. For each outcome variable, data were analyzed to determine the relationship with independent variables. Chi-square analyses were used to test the statistical associations between attitudes towards displays of tobacco products at PoS in three countries and smoking status, attitudes towards PoS TAPS bans, whether or not parents perceived that PoS tobacco product displays motivated youth to smoke, whether or not parents perceived PoS displays of tobacco products as advertising, and how parents perceived the level of importance of exposure to PoS tobacco product displays for influencing youth, and attitudes towards children's exposure to tobacco products at PoS.

Results

Frequencies and Descriptive Statistics

The response rate was 88.4%. The sample was 67.7% female and 32.3% male with the mean age of 41 (minimum age=25, maximum age=69). 75.2% were never

smokers, 13% were current smokers and 11.8% were smokers in the past. Education level was categorized into two groups; high level of education included those with completed college/university degree or higher and low level of education covered those with incomplete college/university degree or lower. 72.5% had high level of education and 27.5% had low level of education. Income was categorized into three groups: low income denoting “0” consisted of monthly salaries ranging between 0-150 thousand tenge, middle income denoting “1” consisted of monthly salaries ranging between 150-300 thousand tenge and high income denoting “2” consisted of monthly salaries of 300 thousand tenge and higher. The percentages were 50.2%, 37.5% and 12.3% respectively. The sample was pretty diverse in term of nationalities, but we decided to categorize respondents by the most common nationalities which were Kazakh (71.7%) and Russian (16.1%), other nationalities were grouped as “other” (12.2%). Employment was divided into four groups: government employee (34.8%), non-government employee (27.1%), self-employed (24.5%) and those with no job including housewives, retired, students, unable to work and those who answered, “don’t know” (13.6%).

FCTC 13 knowledge

We tested respondents’ knowledge on WHO FCTC Article 13 by asking if they knew about its existence and providing some background information about its guidelines. 56.7% answered “yes” and 43.3 answered “no”.

Attitudes towards a law prohibiting all advertisements for tobacco products

44.2% of participants would favor, whereas, 36.6% would oppose a law prohibiting all advertisements for tobacco products. 19.2 answered “don’t know”.

Attitudes towards PoS TAPS ban

Respondents were asked whether they are in favor of Point of Sale (PoS) TAPS bans. Answers were as follows: “yes”=77.3%, “no”=22.7%.

Knowledge of terminology

We assessed participants’ knowledge on term/expression “display of tobacco products at points of sale” and results revealed that the majority 62.8% did not know the term, as opposed to 37.2% of those who knew it.

Attitudes towards a law that would completely prohibit display of tobacco products at points of sale

Almost half (49.8%) of the respondents would favor such law. Percentages split quite evenly between answers “oppose”=24.2% and “don’t know”=26%.

Awareness of tobacco advertising at PoS

We also asked participants whether they saw any advertisements or promotions for tobacco products at points of sale (such as stores, kiosks, etc.) during the past 30 days. 50.6% answered “no”, 36.7% answered “yes” and 12.7% answered that they did not visit any points of sale in the past 30 days.

Perceptions of tobacco PoS display’s impact on young people’s motivation to smoke

67.4% of parents thought that tobacco PoS displays motivate adolescents to smoke. Whereas 17.5% of parents thought otherwise and 15.1% answered “don’t know”.

Perceptions of tobacco PoS display as advertisements

Likewise, we assessed whether respondents perceive tobacco PoS display as advertisements. The distribution of answers was almost equal: 50.3% perceived PoS displays as advertisements, and 49.7% did not.

Attitudes towards students’ exposure to PoS tobacco displays

74.9% of parents feel negatively (do not want youth to be exposed) about students being exposed to PoS tobacco displays. 21.3% feel neutrally (do not care about exposure) and 3.8% feel positively (want youth to be exposed).

Concern of exposure level to PoS tobacco displays

In addition, we evaluated how important is the level of exposure to display of tobacco products at PoS to their own child is for the parents. The majority (54.4%) of the parents indicated that it was “very important” (they are very concerned about their child being exposed to tobacco products at PoS) to them. Following with “essential” (they are extremely concerned about their child being exposed to tobacco products at PoS) (25.3%), “not important” (they are not concerned about their child being exposed to tobacco products at PoS) (10.3%) and “somewhat important” (they are somewhat concerned about their child being exposed to tobacco products at PoS) (10%).

Attitudes towards display of tobacco products at PoS in Russia, Norway and Kazakhstan (Table 2).

Table 2. The following table shows results for three countries for parents

	Display Russia	Display Norway	Display Kazakhstan
Favor	165 (32.1%)	184 (35.8%)	53 (10.3%)
Oppose	206 (40.1%)	171 (33.3%)	351 (68.3%)
Don't know	143 (27.8%)	159 (30.9%)	110 (21.4%)

Moreover, we carried out Pearson's chi square tests to further examine outcome variables such as display of tobacco products at PoS in three countries and whether they differ by smoking status, attitudes towards PoS TAPS ban, whether or not they think that PoS tobacco displays motivate youth to smoke, whether or not they perceive PoS tobacco displays as advertisements, attitudes towards children's exposure to tobacco products at PoS, and concern of level of exposure to tobacco products at PoS.

Bivariate analyses

Attitudes towards display of tobacco products at PoS in Russia and independent variables

Most of the non-smokers (42.8%) and smokers in the past (41.7%) opposed type of tobacco products display in Russia, while the majority of current smokers answered "don't know" (40.9%).

Attitudes towards PoS TAPS ban were consistent with the answers given to type of tobacco products display: majority (47.4%) of those who favored Russia's type of display also favored a law that completely prohibits display of tobacco products at points of sale; the results are the same for those who opposed (68.9%) and answered "don't know" (51.9%).

Regarding perceptions on PoS tobacco products displays and adolescent motivation to smoke, only group of parents who answered "don't know" (44.74%) were consistent with their answers related to whether they think that PoS tobacco displays motivate students to smoke. Of those who answered negatively, equal amount (35.2%) of people favored and was not sure about Russia's type of tobacco display, whereas 29.6% opposed. Most of parents (42.8%) who think that PoS tobacco displays motivate young people to smoke, opposed Russia's type of tobacco display.

Regardless of whether or not respondents perceived PoS tobacco displays as advertising, many of them opposed Russia's type of tobacco display. However, it is worth noting that of those who perceived PoS tobacco displays as advertising, got

split almost equally between favoring (38.8%) and opposing (39.1%) display of tobacco products at PoS in Russia.

In addition, participants' attitudes towards children's exposure to tobacco products at PoS were consistent with their opinions on Russia's type of tobacco display. Most (47.2%) of those who feel negative about children being exposed to display of tobacco products at PoS opposed type of tobacco display in Russia. Most (50.9%) of those who feel neutral about children being exposed to display of tobacco products at PoS answered "don't know" regarding type of tobacco display in Russia. Most (68.4%) of those who feel positive about children being exposed to display of tobacco products at PoS favored type of tobacco display in Russia.

Moreover, concern of level of exposure to tobacco products at PoS for their own child was distributed between different opinions on Russia's type of tobacco display as follows: for those to whom level of exposure was "not important", more than half (51.9%) expressed their ambiguity towards type of display in Russia; likewise, for those to whom level of exposure was "somewhat important", majority (39.2%) expressed their ambiguity towards type of display in Russia; for those to whom level of exposure was "very important", most of the respondents (44.7%) opposed; for those to whom level of exposure was "essential", majority of the participants (38.2%) favored type of tobacco display in Russia.

Attitudes towards display of tobacco products at PoS in Norway and independent variables

The majority of non-smokers (35.8%) opposed type of tobacco products display in Norway. Most of the current smokers (42.4%) answered "don't know" and 45% of past smokers favored Norway's type of tobacco display.

Likewise the case with Russia's type of tobacco display, attitudes towards PoS TAPS ban were consistent with the answers given to type of tobacco display in Norway: the majority (50.8%) of those who favored Norway's type of tobacco display also favored a law that completely prohibits display of tobacco products at points of sale; the results are the same for those who opposed (60.7%) and answered "don't know" (50.4%).

Similarly, perceptions on PoS tobacco displays and adolescent motivation to smoke were analogous to opinions on type of display, except those who answered negatively: most of (50%) respondents who were ambiguous about their perceptions were also ambiguous about whether they would oppose or favor the Norway's type of tobacco display. Most of those who answered "yes" (39.6%) and "no" (39.8%)

in regard to perceptions on PoS tobacco displays and adolescent motivation to smoke favored type of tobacco display in Norway.

In addition, most of those (44.6%) who perceived PoS tobacco displays as advertising favored tobacco display type of Norway. Most of those (37%) who did not perceive PoS tobacco displays as advertisements opposed tobacco display type of Norway.

Regarding participants' attitudes towards children's exposure to tobacco products at PoS, results were consistent with their opinions on Norway's type of tobacco display. Most (38.1%) of those who feel negative about children being exposed to display of tobacco products at PoS opposed type of tobacco display in Norway. Most (45.4%) of those who feel neutral about children being exposed to display of tobacco products at PoS answered "don't know" regarding the type of tobacco display in Norway. Most (63.2%) of those who feel positive about children being exposed to display of tobacco products at PoS favored type of tobacco display in Norway.

Furthermore, following is the distribution of concern of level of exposure to tobacco products at PoS for their own child between different opinions on Norway's type of tobacco display : for those to whom level of exposure was "not important", 44.2 % showed their ambiguity towards type of display in Norway; for those to whom level of exposure was "somewhat important", majority (39.2%) expressed their ambiguity towards type of tobacco display in Norway; for those to whom level of exposure was "very important", most of the respondents (38.3%) opposed; for those to whom level of exposure was "essential", majority of the participants (42.1%) favored type of tobacco display in Norway.

Attitudes towards display of tobacco products at PoS in Kazakhstan and independent variables

Regardless of their smoking status, majority of the participants, 72.7% of non-smokers, 42.4% of current smokers and 70% of smokers in the past opposed current state of tobacco display at PoS in Kazakhstan.

Attitudes towards PoS TAPS ban were consistent with the answers given to type of tobacco display in Norway only for two groups: majority (80.3%) of those who opposed Kazakhstan's type of tobacco display would also oppose a law that completely prohibits display of tobacco products at points of sale; most (48.9%) of those who answered "don't know" would also be ambiguous about display type. 75.3% of those who opposed Kazakhstan's type of tobacco display favored the law.

Same as with the smoking status, regardless of their perceptions on PoS tobacco displays and adolescent motivation to smoke, most of the parents, specifically, 56.6% of those who answered “don’t know”, 57.9% of those who answered “no” and 74.3% of those who answered “yes” opposed current state of display of tobacco products in Kazakhstan.

Similarly, regardless of whether they perceive PoS displays as advertising or not, greater part of respondents 71.3% and 65.5%, respectively, opposed type of tobacco display in Kazakhstan.

Respondents’ attitudes towards children’s exposure to tobacco products at PoS were consistent with their opinions on Kazakhstan’s type of tobacco display. Most part (78.4%) of those who feel negative about children being exposed to display of tobacco products at PoS opposed type of tobacco display in Kazakhstan. Many (46.3%) of those who feel neutral about children being exposed to display of tobacco products at PoS answered “don’t know” regarding type of tobacco display in Kazakhstan. The majority (63.2%) of those who feel positive about children being exposed to display of tobacco products at PoS favored type of tobacco display in Kazakhstan.

Furthermore, regardless of their concerns towards importance of exposure level to PoS tobacco displays most of the parents opposed display of tobacco products in Kazakhstan, in particular, of those who answered “not important” 51.9%, of those who answered “somewhat important” 56.9%, of those who answered “very important” 74.9% and of those who answered “essential” 67.2%.

We conducted a one-way ANOVA (Table 3) test to determine if age of the respondents was different for groups with different types of tobacco products’ display in each of the countries.

Table 3. Bivariate analysis –associations between independent variables and outcome variable (display of tobacco products at Point of Sale in Kazakhstan)

Display of tobacco products at PoS in KZ	Smoking status		
	Non-smoker	Current smoker	Smoker in the past
oppose	72.70%	42.42%	70.00%
Favor	8.14%	15.15%	18.33%
don’t know	19.16%	42.42%	11.67%

Table 3 continued.

	Concern of level of exposure to tobacco products at Point of Sale to their own child			
Display of tobacco products at PoS in KZ	Not important	Somewhat important	Very important	Essential
Oppose	51.92%	56.86%	74.91%	67.19%
Favor	7.69%	7.84%	11.27%	10.94%
Don't know	40.38 %	35.29%	13.82%	21.88%

Table 3 continued.

	In favor of Point of Sale advertising and promotion of tobacco bans	
Display of tobacco products at PoS in KZ	No	Yes
Oppose	60.34%	70.89%
Favor	4.31%	12.15%
Don't know	35.34%	16.96%

Table 3 continued.

	Law prohibiting all advertisements for tobacco products		
Display of tobacco products at PoS in KZ	Favor	Oppose	Don't know
Oppose	72.69%	76.60%	42.42%
Favor	14.54%	5.85%	9.09%
Don't know	12.78%	17.55%	48.48%

Table 3 continued.

	Law that prohibits display of tobacco products at Points of Sale		
Display of tobacco products at PoS in KZ	Favor	Oppose	Don't know
Oppose	75.30%	80.33%	42.75%
Favor	12.75%	7.38%	8.40%
Don't know	11.95%	12.30%	48.85%

Table 3 continued.

Display of tobacco products at PoS in KZ	Tobacco Point of Sale displays motivate children to smoke		
	No	Yes	Don't know
Oppose	57.95%	74.34%	56.58%
Favor	6.82%	13.57%	1.32%
Don't know	35.23%	12.09%	42.11%

Kazakhstan

Participants were classified into three groups: Favor, Oppose and Don't know. There was a statistically significant difference between groups as determined by one-way ANOVA ($F(2,488) = 3.31, P = 0.0357$). A Tukey post-hoc test revealed that age was statistically significantly lower in the Oppose group compared to the Don't know group (-1.85 ± 0.77 years, $P = 0.043$). However, there were no statistically significant differences between the Favor and Don't know groups (-2.32 ± 1.18 years, $P = 0.123$), or the Oppose and Favor groups (0.46 ± 1.04 years, $P = 0.896$).

Russia

Respondents were classified into three groups: Favor, Oppose and Don't know. There was a statistically significant difference between groups as determined by one-way ANOVA ($F(2,488) = 4.00, P = 0.0189$). A Tukey post-hoc test revealed that age was statistically significantly lower in the Oppose group compared to the Don't know group (-2.06 ± 0.76 years, $P = 0.019$). However, there were no statistically significant differences between the Favor and Don't know groups (-0.68 ± 0.80 years, $P = 0.671$), or the Oppose and Favor groups (-1.38 ± 0.3 years, $P = 0.147$).

Norway:

Parents were classified into three groups: Favor, Oppose and Don't know. There was a statistically significant difference between groups as determined by one-way ANOVA ($F(2,488) = 3.47, P = 0.0319$). A Tukey post-hoc test revealed that age was statistically significantly lower in the Oppose group compared to the Don't know group (-2.04 ± 0.77 years, $P = 0.024$). However, there were no statistically significant differences between the Favor and Don't know groups (-0.96 ± 0.76 years, $P = 0.413$), or the Oppose and Favor groups (-1.07 ± 0.75 years, $P = 0.325$).

Discussion

Present study reveals that majority of parents oppose current state of tobacco products' display at PoS in Kazakhstan, specifically, 68.3% and favor Norway's type of tobacco display (35.8%). Norway was the first country to affirm the WHO FCTC in June 2004. After that in the 1st of January 2010, Norway implemented the PoS display ban for tobacco products along with smokeless tobacco (snus) and smoking accessories. Retail outlets can choose how to cover up tobacco products. Commonly, tobacco products are placed in closed containers above or below the counter, in closed drawers or cabinets or behind sliding doors, shutters or similar solutions (Examples in Picture 1a and b). Price lists must contain only neutral price information with no pictures or other types of information. They can be presented next to the cash register or given to the customer upon request. Only one list per cash register is allowed (Ollila, WHO FCTC Convention Secretariat, 2015).

In Kazakhstan there is no such ban. Tobacco products are openly displayed at PoS. To make tobacco products more attractive to young people they are placed on the eye level of children and near candies and toys, stimulating children to see them as not dangerous everyday items (Examples in pictures 2a and b). That is the case across the board in countries with no effective PoS TAPS ban. There was a study among students aged 13-16 years in Scotland, exploring relationship between PoS displays of cigarettes and brand awareness. It revealed that students visiting small shops more frequently and those who recognized cigarette displays had higher brand awareness. In addition, adolescents described PoS tobacco displays as being colorful, eye-catching and potentially attractive to young people (Sluijs et al., 2016).

More than half (56.7%) of respondents knew about WHO FCTC Article 13 and its guidelines. However, most of them (62.8%) did not know the term "display of tobacco products at points of sale". Nonetheless, 77.3% of participants had positive attitudes towards PoS TAPS bans and 49.8% favored a law that would completely prohibit display of tobacco products at PoS. 67.4% of parents recognized tobacco PoS displays as a motivation for adolescents to smoke. Perceptions of respondents have been proven to be true scientifically. A study conducted in UK shows that among non-susceptible never smokers seeing tobacco PoS displays more often is associated with a higher risk of becoming susceptible to smoking [adjusted relative risk ratio (RRR)=1.74]. Identifying a higher number of brands among non-susceptible never smokers the risk of becoming susceptible to smoking and of becoming a smoker was twice higher (Bogdanovica et al., 2014). Likewise, a study among Nigerian adolescents revealed that cumulative TAPS exposure was significantly associated with increased odds of cigarette use (AOR=1.73) and ever

cigarette use (AOR=1.29); along with increased susceptibility to cigarette smoking (AOR=1.18) among non-smokers (Chido-Amajuoyi et al., 2017).

This study shows that majority (74.9%) of parents had negative attitudes about students being exposed to PoS tobacco displays. Furthermore, concern of level of exposure to display of tobacco products at the PoS for their own children was assessed. Most (54.4%) of the parents indicated that it was “very important” to them, following with “essential” (25.3%). According to the study in the UK, there was significantly less parental tolerance for child exposure to nicotine/smoking than gambling and alcohol (Hood and Parke, 2015). This indicates that children’s exposure to tobacco products and perceptions of that exposure are of high importance to parents.

As stated in the meta-analysis (consisting of 13 studies) on PoS tobacco promotion and youth smoking: children and adolescents more commonly exposed to PoS tobacco promotion have about 1.6 times higher odds of having tried smoking and about 1.3 times higher odds of initiating smoking in the future, compared to those less commonly exposed (Robertson et al., 2015). In accordance with another review (including 19 longitudinal studies) which examined impact of tobacco advertising and promotion on increasing adolescent smoking behaviors, results imply that exposure to tobacco advertising and promotion is linked to the probability that young people will start to smoke. Authors of the review conclude that tobacco advertising and promotion increases adolescents’ possibility smoking initiation based on evidence of a dose-response relationship, homogeneity of findings across different observational studies, strength and specificity of this association, along with theoretical plausibility in regard to effect of advertising (Lovato et al., 2011).

Two experimental studies examined effect of changing the location or visibility of the tobacco power wall in a life sized replica of a convenience store on teenagers’ susceptibility to future cigarette use. According to the study conducted in 2015 hiding the tobacco power wall substantially decreased young people’s susceptibility to future cigarette smoking compared to leaving it exposed ($p=0.02$). Placing the tobacco power wall on a sidewall away from the cashier had no impact on future cigarette use susceptibility compared to the exposed position ($p=0.80$) (Shadel et al., 2015). Similarly, more recent study suggests that attention toward the tobacco power wall was found to be importantly related to future smoking susceptibility with $p=0.046$, while adjusting for baseline cigarette smoking susceptibility and other potential confounders (S.C. Martino et al., 2018).

Furthermore, there have been studies carried out to test the effect of PoS TAPS bans. In July 2012 New Zealand implemented PoS TAPS ban. A study evaluating impact

of this tobacco control act showed that between 2011 and 2014, smoking experimentation declined from 23% to 17% (AOR=0.73); current smoking rates from 9% to 7% (AOR=0.71), initiation in the last year from 13% to 11% (AOR=0.91). Attempted cigarette purchase in the past 30 days among smokers had fallen from 30% to 26% (AOR=0.77) (Edwards et al., 2016). Another study assessed effect of PoS tobacco display removal on smoking behavior among adolescents in 25 European countries. Results suggest that regardless of gender, enforcement of a PoS display ban was related to 15% decline in the odds of regular smoking (OR=0.85) but was not significantly linked to perceived accessibility of tobacco (OR=0.97) (Van Hurck et al., 2018). Ireland enabled PoS tobacco display ban in July 2009. Following the implementation, a study was conducted to assess the short-term effects of the ban. It showed that display recall declined substantially for adults (from 49% to 22%; $p<0.001$), even more for adolescents (from 81% to 22%, $p<0.001$). After legislation, 14% of adult smokers thought that the law had made it easier to quit, 38% of adolescents thought that the law would make it easier for children not to smoke (Mc Neill et al., 2010).

As it was stated in the WHO MPOWER 2017 report 7 primarily low and middle income countries, specifically, Uganda, Senegal, Nigeria, Afghanistan, and Republic of Moldova introduced an extensive TAPS ban, as well as, at the PoS (WHO, 2017). During the Seventh session of the Conference of the Parties (COP) in 2016 to the WHO FCTC accepted the United Nation's (UN) 2030 Agenda for Sustainable Development, along with Sustainable Development Goal (SDG) 3, to "ensure healthy lives and promote well-being for all at all ages". In addition, target 3A of the goal is to "strengthen the implementation of the WHO FCTC in all countries, as appropriate" as a way of reaching SDG 3 by 2030 (UN, 2017). In my opinion, Kazakhstan should follow the lead of countries who have implemented comprehensive PoS TAPS bans in order to reach SDG 3 and guarantee well-being of its nation.

Currently, The RK's law on advertising of 2003 (as amended in June 2007 by the law on amending legislative proclamations of advertising) is the principal law in the republic controlling the advertising of tobacco products; it provides a general ban on the advertising of tobacco and tobacco products, as well as the forms of sponsorship and promotion. Additionally, the law bans the advertising of goods (works, services) with the elements of a trademark or name that is known as the name of tobacco or tobacco products (The Law of RK, 2007). Nonetheless, according to the Global Adult Tobacco Survey (GATS) Kazakhstan 2014 results 25.7% of adults noticed advertising, sponsorship or sales promotion of cigarettes, whereas 14.0% of adult population noticed the cigarette advertising at PoS, 2.6% on television, 2.8% on

billboards, and 7% on the Internet. Overall, 83.9% of adults were in favor of a total ban on tobacco products advertising (GATS RK Global Report, 2014).

Strengths and limitations

Present study has a few strengths. To our best knowledge, this is the first study to assess the knowledge, attitudes and perceptions of parents in regard to PoS TAPS ban. Random selection of schools positively effects generalizability of the results.

This study has some limitations that should be kept in mind when clarifying results. First, since questionnaires were distributed to students first, and then through students to parents, there is a possibility that some of the students would have answered the questionnaires themselves or asked others (older siblings/friends) to fill them out. Second, the results from the self-reported questionnaires could have been subject to response bias.

Conclusion

Public support has been one of the determinants for successful tobacco control advocacy in the world. Results of this study show that parents, despite whether they are smokers or not, oppose current state of PoS TAPS in Kazakhstan. The findings of this study will be valuable for developing PoS TAPS ban policies and programs targeted at parents in Kazakhstan. Strong support by parents strengthens the position of the government to regulate PoS TAPS through building public awareness, advocacy with stakeholders and enforcement of law.

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