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#### Article:

Argefa, Terefe, Carnegie, Tyryn, Abraham Kassa, Selam et al. (2 more authors) (2023) Tobacco advertising, promotion, and sponsorship (TAPS) in Ethiopia: A scoping review and narrative synthesis. Journal of Global Health Reports. e2022065. ISSN: 2399-1623

https://doi.org/10.29392/001c.57372

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#### Research Article

# Tobacco advertising, promotion, and sponsorship (TAPS) in Ethiopia: a scoping review and narrative synthesis

Terefe G. Argefa<sup>1,2</sup> 👵 🔊, Tyryn Carnegie<sup>2</sup>, Selam A. Kassa<sup>2</sup>, Rachel Kitonyo-Devotsu<sup>2</sup>, Noreen D. Mdege<sup>2,3,4</sup> 👨

<sup>1</sup> Public Health, ICAP at Columbia University Mailman School of Public Health, Addis Ababa, Ethiopia, <sup>2</sup> Development Gateway: an IREX Venture, Washington, DC, United States, <sup>3</sup> Department of Health Sciences, University of York, York, United Kingdom, <sup>4</sup> Centre for Research in Health and Development, Amos Drive, York, United Kingdom

Keywords: promotion and sponsorship, tobacco advertising, Ethiopia, FCTC 13

https://doi.org/10.29392/001c.57372

### Journal of Global Health Reports

Vol. 6, 2022

#### **Background**

Tobacco advertising, promotion and sponsorship (TAPS) has been shown to increase tobacco use in both adults and young people. In Ethiopia, TAPS is recognised as a top priority for the government, and all tobacco advertising, promotion, and sponsorship forms are prohibited. There is recognition that there are gaps in the evidence needed to inform policy and practice on TAPS, but the extent and nature of these gaps have not been explored. This review was aimed at understanding the extent and nature of the evidence gaps on TAPS in Ethiopia and identifying primary research priorities to inform future research direction.

#### **Methods**

Systematic searches were conducted in February 2022 in the following research databases: Medline, EMBASE, and PsycInfo. Two reviewers independently screened the study reports for eligibility and extracted data from the eligible studies. The extracted data was collated and summarised descriptively and policy, practice, and research recommendations were drawn. Research topics on TAPS in Ethiopia that stakeholders perceived to be priorities for primary research were identified through a consultation workshop.

#### **Results**

579 research reports were identified, and only six studies were included in the scoping review. The included studies explored the following topics: the use of tobacco imagery in movies/films (two studies); the association between mass media exposure or home internet access and tobacco use (two studies), watching of televised football and tobacco smoking in adolescents (one study), exposure to point-of-sale advertising of tobacco products and daily occurrence of smoking or second-hand smoke exposure in the home among women (one study), and exposure to anti-smoking messages through mass media and disparities in risk perceptions across socio-economic and urban-rural subgroups (one study). None of the included studies investigated tobacco-related sponsorship. The top research priority topics identified by stakeholders in Ethiopia were: 1) barriers and facilitators to TAPS policy implementation, enforcement, and compliance monitoring; and 2) developing and testing effective, low-cost, and scalable strategies for TAPS enforcement and compliance monitoring.

#### **Conclusions**

There is a need for research evidence to inform policy and practice on TAPS in Ethiopia, particularly on barriers and facilitators to TAPS policy implementation, enforcement, compliance monitoring, and effective, low-cost, and scalable strategies for TAPS enforcement and compliance monitoring.

Tobacco advertising (i.e., the use of media or commercial communication to create positive imagery or association for tobacco products), <sup>1</sup> promotion (i.e., activities designed

to increase the sales of tobacco products), <sup>1</sup> and sponsorship (i.e., contribution to any event, activity or individual with the aim, effect or likely effect of promoting a tobacco prod-

uct)<sup>2</sup> have all been shown to increase tobacco use.<sup>2,3</sup> This effect is not only in adult consumers: tobacco advertising, promotion, and sponsorship (TAPS) also increases the likelihood that adolescents will start to smoke.<sup>1–3</sup> On the other hand, it is well established that comprehensive bans on TAPS decrease tobacco use.<sup>2</sup> Given these trends, Article 13 of the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) calls for every Party to the treaty to introduce and enforce a comprehensive ban on TAPS following its constitution or constitutional principles.<sup>1</sup>

Despite global progress in adopting TAPS bans and regulations, no country has completely silenced tobacco industry promotions. 4 Ethiopia's most recent Global Adult Tobacco Survey (GATS) conducted in 2016 found that 4.3% of participants had noticed at least one cigarette advertisement or promotion outside stores or a tobacco-related sporting event sponsorship in the 30 days preceding their survey interview.<sup>5</sup> According to Ethiopia's national STEPwise approach to non-communicable disease risk factor surveillance (STEPS) survey in 2015, 0.8% of respondents had noticed advertisements or signs promoting cigarettes in stores, 6 0.2% had noticed free sample of cigarettes, whilst this was 0.6% for sale prices on cigarettes, and 0.2% each for coupons for cigarettes and free gift or special discounts. 0.8% had noticed clothing or other items with a cigarette brand name or logo, and 0.1% had noticed cigarette promotions through the mail.<sup>6</sup> Furthermore, the National Tobacco Enterprise has been accused of involvement in illegal advertising and promoting tobacco products.<sup>7</sup>

Ethiopia signed the WHO FCTC in 2004 and has had laws to regulate tobacco products since 2009. The country ratified the FCTC in 2014 through Proclamation 822/2014, and the 2015 Tobacco Control Directive that included some key measures under the FCTC. Ethiopia's current federal tobacco control legislation is the 2019 Food and Medicine Administration Proclamation 1112/2019, and the 2021 Tobacco Control Directive No. 771/2021, including several administrative and legal measures against non-complying products and activities. All indirect or direct forms of tobacco advertising, promotion, and financial or other tobacco sponsorships are prohibited under Article 61 of Proclamation 1112/2019. In retail shops, tobacco products should be placed behind or under the counter so that customers may not directly grasp or see the product.

We conducted country assessments and stakeholder workshops in Ethiopia in 2020 and 2021 as part of the Tobacco Control Data Initiative (TCDI) that aims to understand tobacco data needs, identify existing data, confirm gaps in available tobacco data, collect new data to fill those gaps, and develop tools to enable policymakers to use data more effectively to inform policy. These activities involved 14 individuals representing 13 key stakeholder organisations (seven government ministries, five civil society organisations, and one academic institution) in tobacco control in Ethiopia and revealed that TAPS was a top priority for the government. There is wide recognition that many countries face significant challenges in implementing and enforcing TAPS restrictions, including a lack of capac-

ity to enforce and monitor compliance and limited research to inform implementation, enforcement, and compliance monitoring.<sup>4,14,15</sup> The extent and nature of evidence gaps in TAPS policy have not been explored in Ethiopia. Therefore, this scoping review aimed to understand these evidence gaps to co-produce, with key stakeholders, a list of context-specific research priorities for generating evidence directly relevant to decision-making on TAPs in Ethiopia.

#### **METHODS**

#### OVERALL DESIGN

The scoping review followed a well-established framework that consisted of specifying the review questions, identifying relevant studies, selecting studies to include in the review, charting the data, and collating, summarising and reporting the results.  $^{16-19}$  A consultation meeting with key tobacco control stakeholders in Ethiopia was also conducted in order to get their input and validate the findings from the review.

#### **IDENTIFYING RELEVANT STUDIES**

The searches were conducted in the following electronic databases: Medline (1946 to 09 February 2022), EMBASE (1974 to 08 February 2022), and PsycInfo (1967 to February Week 1, 2022). The search followed Cochrane and Centre for Reviews and Dissemination guidelines in designing searches.<sup>20,21</sup> A comprehensive list of search terms was developed from experts' opinions, previous literature reviews and controlled vocabularies (Medical Subject Heading (MeSH) and Excerpta Medica Tree (Emtree)). The terms were arranged into three blocks: Block 1- tobacco product terms; Block 2- advertising, promotion and sponsorship terms; Block 3- Ethiopia. The search strategies were reviewed by two reviewers who were not involved in building the search using the Peer Review of Electronic Search Strategies checklist. 22 The search strategies for each of the three databases are provided in the Online Supplementary Document, Table S1. The reference lists of included studies were also reviewed, and key stakeholders working on tobacco control in Ethiopia were contacted to identify any ongoing, unpublished studies, grey literature, or other studies that the searches might have missed. No date, study design, publication type or language limits were imposed on the searches. The searches were reported per the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) literature search extension.<sup>23</sup>

#### STUDY SELECTION

All identified study records were downloaded and imported into an Endnote Library, and duplicates were removed. From Endnote, they were imported into the Rayyan software (Rayyan – Intelligent Systematic Review) used for study record management. The study records were screened for eligibility in two stages: screening titles and abstracts, and screening of the full texts of those studies identified in the first stage as potentially eligible. Two researchers

independently screened each article at each stage using a standardised study selection form that had been piloted on four studies. Disagreements were resolved by consensus between reviewers or through referral to a third reviewer where consensus could not be reached.

Studies were eligible for the scoping review if they reported on any aspect of TAPS in Ethiopia. We used the FCTC's comprehensive definition that includes "all forms of commercial communication, recommendation or action and all forms of contribution to any event, activity or individual with the aim, effect, or likely effect of promoting a tobacco product or tobacco use either directly or indirectly". Studies that were only available as abstracts with no full text were excluded.

#### DATA CHARTING

A data extraction tool developed in Microsoft Excel (Office 2019) for this scoping review was used to chart data from the included studies. The tool was piloted on a random sample of two articles and modified where necessary before use. We extracted data for each of the following three domains: general study characteristics (i.e., author, year of publication, location, administrative district, study setting, study design), principal focus (i.e., topic (advertisement, promotion, or sponsorship), research question(s), and type of intervention) and study population (age, gender, ethnicity, sample size, socio-economic status).<sup>24</sup> We also included summaries of the results from each of the studies. For this stage, one researcher read each included study in full and charted data relevant to the review under the appropriate data variable. A second reviewer independently checked the charted data.

#### COLLATING, SUMMARISING AND REPORTING

The variables were descriptively analysed according to the identified domains as described above, and the findings are presented in tables as well as in narrative summaries. These summaries were used to identify the key gaps in the existing literature and make recommendations for future research. We also narratively synthesised study findings according to their study focus areas. The PRISMA extension for scoping reviews was followed to report the scoping review followed.<sup>25</sup>

#### STAKEHOLDER CONSULTATIONS

We invited representatives from the stakeholder organisations listed in **Online Supplementary Document**, Table S2 to an online, one and a half hours consultative meeting where we identified, from the stakeholders' perspective, what the priority research topics on TAPS were. Following the process from our previous scoping review,<sup>24</sup> we presented our scoping review methods, findings and a list of recommendations for future research that we had drawn from this literature (15 minutes). The stakeholders asked questions and sought clarification on the presentation. They also discussed the recommendations we had presented, adding and removing them from the preliminary list as they saw fit (30 minutes). Although we did not pre-

scribe any criteria for the discussions, we requested the stakeholders to consider the following: the importance of the topic for policymaking in Ethiopia, alignment with the government priorities, and the feasibility of conducting research on the topic, for example, in light of the current political climate and other resource constraints. <sup>24</sup> After finalising the research recommendations list, the stakeholders were given about two minutes to independently vote for their first choice in real-time through a poll created on zoom. We ran a second poll to identify research question priorities for the topic that had been chosen as a top priority, where the stakeholders were given another two minutes to cast their vote.

#### **RESULTS**

#### SEARCH RESULTS

Searches of online databases yielded 579 articles, with 477 remaining after removing duplicates (Figure 1). Of these 477 articles, 12 were identified as eligible for full-text screening. However, only ten full texts were successfully retrieved and assessed, for which  $\sin^{26-31}$  were found eligible and included in the scoping review. Of the four considered ineligible, two were conducted in countries other than Ethiopia, and two were not relevant to TAPS.

#### GENERAL STUDY CHARACTERISTICS

Five of the included studies were specifically in Ethiopia, <sup>27–31</sup> whilst one was a multi-country study. <sup>26</sup> Two studies focused on specific regions (Addis Ababa, Oromia, Southern Nations, Nationalities, and Peoples' Region<sup>30</sup> and Sidama<sup>31</sup>), whilst the rest took a national perspective. Three studies were based on household cross-sectional surveys, <sup>26,29,30</sup> one on a school-based cross-sectional surveys and two on content analysis of film/video sampled from YouTube. <sup>27,28</sup> All six articles were published within the eight years prior to the scoping review: one each in 2015, <sup>26</sup> 2016<sup>31</sup> and 2022, <sup>29</sup> and three in 2019. <sup>27,28,30</sup> All six studies used data that was collected sometime between 2006 and 2018, which is before Ethiopia's current federal tobacco control legislation (Proclamation 1112/2019), <sup>10</sup> and the 2021 Tobacco Control Directive No. 771/2021. <sup>11</sup>

#### STUDY FOCUS

All studies investigated some form of tobacco advertising or promotion. Two focused on tobacco imagery in Ethiopian and Amharic movies/films.<sup>27,28</sup> The association between mass media exposure<sup>26</sup> or home internet access<sup>30</sup> and tobacco use was investigated by two studies. One of these studies also investigated the association between watching televised football regularly and tobacco smoking in adolescents.<sup>30</sup> Petersen et al. investigated whether exposure to point-of-sale advertising of tobacco products was associated with daily smoking or second-hand smoke exposure in the home among women.<sup>31</sup> Lastly, Bekalu and colleagues investigated whether and how exposure to anti-smoking messages through mass media was associated with dispar-

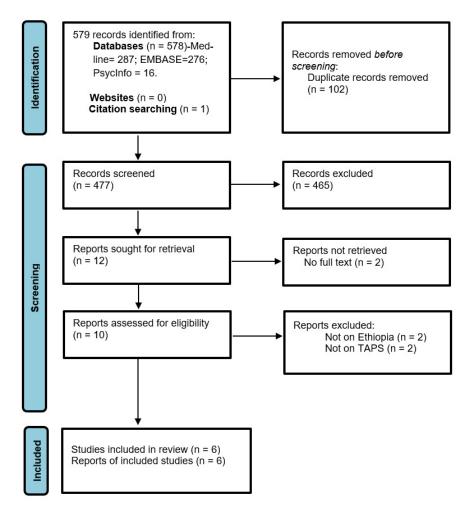


Figure 1. Flow of TAPS studies in the review process

ities in risk perceptions across socio-economic and urbanrural subgroups.<sup>29</sup> None of the included studies specifically investigated tobacco-related sponsorship of events or activities

Two of the six studies were not solely focused on TAPS but included it as one of the many risk factors for tobacco use or second-hand smoke exposure under investigation in the study.  $^{30,31}$ 

#### STUDY POPULATION CHARACTERISTICS

Four of the six studies involved human participants: three were in adults, <sup>26,28,31</sup> whilst one was in adolescents (Table 1). <sup>30</sup> The proportion of females ranged from 50.1% to 100%, and the sample sizes varied substantially, ranging between 353 to 159,462 respondents. The biggest study involving about 160 thousand participants spanned nine African countries, including Ethiopia, <sup>26</sup> this study utilised data from the Demographic and Health Survey (DHS) in Ethiopia 2011, a nationally representative survey of 16,515 women aged 15-49 and 14,110 men age 15-59 years. <sup>32</sup> The two studies that involved an analysis of film videos had small sample sizes of 30<sup>27</sup> and 123. <sup>28</sup>

#### SUMMARY OF STUDY FINDINGS

The study findings are summarised below under three subheading, i.e., the association between TAPS and tobacco use or second-hand tobacco smoke exposure; mass media consumption and its association with tobacco use; and the occurrence and portrayal of tobacco use in films

# THE ASSOCIATION BETWEEN TAPS AND TOBACCO USE OR SECOND-HAND TOBACCO SMOKE EXPOSURE

The study by Getachew et al. found that adolescents with internet access (Odds Ratio [OR] 1.75; 95% CI: 1.35 to 2.27), or who possessed an item with cigarette imagery (OR 2.41; 95% CI: 1.78 to 3.25), were more likely to smoke when compared to those who did not after adjusting for other factors. The smoking football was a significant predictor of smoking in the univariate analysis, but not when the analysis was adjusted for other variables. Petersen and colleagues found that women exposed to point-of-sale tobacco advertising within the last 30 days were more likely to report experiencing daily occurrence of smoking/ second-hand tobacco smoke exposure in the home (OR 2.87; 95% CI:1.26 to 6.54) than those who had not. The second-second second s

Table 1. Study sample characteristics

Author	Population group	Gender distribution	Age range [Mean age (standard deviation)]	Sample size
Achia <sup>26</sup>	Adults	63.5% female, 36.5% male	15–49 years for women; 15–59 years for men	159,462
Alemayehu <sup>27</sup>	Amharic film videos on YouTube	-	-	30
Bekalu & Viswanath <sup>28</sup>	Ethiopian movie videos on YouTube	-	-	123
Bekalu et al <sup>29</sup>	Adults	50.1% female, 49.9% male	≥15 years [31.2 (14.8)]	10,150
Getachew et al <sup>30</sup>	Adolescents in high school	53.8% female, 46.2% male	13-19 years [17 years]	3,967
Petersen et al <sup>31</sup>	Adults	100% female	18 - 55 years [29.4 (6.9)]	353

# MASS MEDIA CONSUMPTION AND ITS ASSOCIATION WITH TOBACCO USE

Bekalu et al. found that exposure to anti-smoking messages in the previous 30 days was associated with a higher perceived risk of smoking to health (OR 3.75; 95% CI: 1.41 to 10.02) after adjusting for age, gender, education, wealth, place of residence, and exposure to pro-smoking messages. On the other hand, the association of exposure to anti-smoking messages with the risk perception of second-hand tobacco smoke exposure was insignificant (OR 1.26; 95% CI: 0.64 to 2.46). Respondents who had noticed 'pro-smoking' messaging in the previous 30 days (advertisements or signs promoting tobacco) were more likely to have lower risk perceptions of second-hand smoke than those who had not noticed pro-smoking messaging (OR 0.75; 95% CI: 0.61-0.89).

The study by Achia found that mass media consumption was generally low across the nine Sub-Saharan African countries investigated, including Ethiopia. <sup>26</sup>The radio was the most popular mass media, with 25.5% of women and 36% of men reporting that they listened to the radio almost every day. Only 3.6% of women and 10% of men read newspapers or magazines daily. 71.6% of women did not read print media at all. Nine percent of women and 12% indicated they watched television almost daily. 63.5% of women indicated that they never watched television. The study found that the odds of tobacco use were 5% lower in women with high media consumption compared to women with low media consumption (OR 0.95; 95% CI: 0.82 to 1.00). Tobacco use also declined with increased media utilisation.

# THE OCCURRENCE AND PORTRAYAL OF TOBACCO USE IN FILMS

In the study by Bekalu and Viswanath, 70% (86/123) of the Ethiopian films on YouTube reviewed had a tobacco incident (i.e., one character smoking or using a tobacco product or a character mentioning his/her smoking). These films portrayed smoking as socially acceptable and without adverse health consequences. Most smokers were major characters with more positive/sympathetic (51%) than negative/

unsympathetic (18%) roles. These films with 'tobacco incidents' reached a large audience: they had more than half a million views each on average, with 194 million 'tobacco impressions' delivered on YouTube alone between July 2012 and September 2016. In addition, the movies received significantly more likes than dislikes (z = -8.05, P < 0.001).

Alemayehu's study of 30 Amharic video films released on cinema and uploaded on YouTube in 2018 revealed 141 appearances of tobacco use imagery either as direct use (57 times; 40.4%), implied use (54 times; 38.3%), tobacco paraphernalia (20 times; 14.3%), or a tobacco brand appearance (5 times; 3.5%).<sup>27</sup> The tobacco user was the main character for many direct or implied use cases. The appearances were mainly of cigarettes 105 (75%), followed by Shisha 16 (11.4%) and others 19 (13.6%). These videos have recorded almost 15 million views.

#### STAKEHOLDER CONSULTATION RESULTS

After analysing and synthesising the results, two reviewers developed a preliminary list of research recommendations for discussions during the stakeholder consultation meeting (Table 2).

The meeting was attended by 11 participants representing the following nine organisations: Ministry of Health; Ethiopia Food and Drug Administration; Addis Ababa University, Department of Preventive Medicine; Hawassa University, College of Medicine and Health Sciences; Jimma University, College of Health Sciences & Medicine; Mathewos Wondu Ethiopia Cancer Society; Health Development and Anti Malaria Association; MeQuamia Community Development Organization; and Campaign for Tobacco Free Kids

The stakeholders agreed with the research recommendations with one addition to the list: "Investigating the actors behind indirect advertising activities in Addis Ababa". All eleven stakeholders voted for their preferred research priority in the first round of the poll. Studies on enforcement and compliance monitoring had the majority of the votes (55%; n = 6/11), followed by studies on actors behind indirect advertising (18%; n = 2/11) and the impact of global social media on TAPS (18%; n = 2/11), and lastly awareness

Table 2. TAPS Research recommendations drawn from the literature

Торіс	Potential Research Objectives/Questions		
Impact of TAPS policies	Evaluating the impact of TAPS policies, for example, using before and after comparisons or natural experiments where the data allows		
Compliance monitoring and enforcement	<ul> <li>Assess the level of compliance, for example, to tobacco product placement requirements and bans on point-of-sale advertising and promotions in retail shops; or to sponsorship bans where there is yet to be any research</li> <li>Explore barriers and facilitators to policy implementation, enforcement and compliance</li> <li>Development and testing of strategies to maximise the facilitators and overcome the barriers to enforcement and compliance</li> <li>Developing and testing effective, low-cost and scalable strategies for enforcement and compliance</li> </ul>		
Awareness of the legislation ON TAPS	Assess the level of awareness of the TAPS legislation among those who should comply as well as the general population		
Impact of global social media on TAPS policies	Evaluate the impact of global social media on TAPS policies, and how these policies could be strengthe in that context.		

of legislation which had one vote. None of the stakeholders voted for the evaluation of the impact of TAPS policies.

Nine of the 11 (82%) stakeholders cast their votes in the second voting round to unpack the research priorities for enforcement and compliance monitoring studies. Investigating the barriers and facilitators to policy implementation, enforcement, and compliance; and developing, and testing effective, low-cost, and scalable strategies for enforcement and compliance monitoring were the most preferred options with three votes each out of the nine stakeholder votes. Research on the levels of compliance with TAPS got two votes, whilst developing and testing strategies to maximise the facilitators and overcome the barriers to enforcement and compliance monitoring had one vote.

#### DISCUSSION

This scoping review confirms reports by key tobacco control stakeholders on the scarcity of studies on TAPS in Ethiopia: only six studies were identified, with two of these including TAPS in the context of investigations on other topics. None of the studies identified was on sponsorship. In addition, most of the studies identified were on the association of TAPS with either tobacco use or second-hand tobacco smoke exposure, leaving glaring evidence gaps on enforcement and compliance. This could be because all of the identified studies were conducted before the most recent tobacco control legislation, i.e., the 2019 Food and Medicine Administration Proclamation 1112/2019, <sup>10</sup> and the 2021 Tobacco Control Directive No. 771/2021, which entail a ban on all direct and indirect forms of TAPS.

The positive association between TAPS exposure and to-bacco use/ second-hand tobacco smoke exposure observed in the reviewed studies has also been observed elsewhere. 1-3,33 For example, in an analysis of Global Youth Tobacco Surveys data from Bangladesh, India, Pakistan and Sri Lanka, youths that were exposed to tobacco use in electronic media were twice as likely to be exclusive smokers, 1.6 times more likely to be exclusive smokeless tobacco users, and 2.6 times more likely to be users of both forms of tobacco than those who were not exposed. 34 Similar findings have also been reported in the Republic of Congo

for exposure to tobacco advertisements on television, billboards, and in newspapers/magazines,<sup>35</sup> and in India for watching tobacco use in Bollywood movies.<sup>36</sup> Another study in 22 African countries reported that Zimbabwe and Morocco had the highest (47.1%) and least (12.6%) reported prevalence of tobacco use among school-going adolescents, and this prevalence was significantly associated with exposure to tobacco industry promotion (AOR 3.05;95%CI:2.68-3.47).<sup>37</sup> For Ethiopian films containing tobacco-related imagery, the fact that the majority of smokers are the major characters with more positive/sympathetic views and the portrayal of tobacco use as socially acceptable behaviour with no negative health consequences is particularly worrying as this is likely to make the smoking imagery more salient and attractive, particularly to young people.<sup>38</sup> The inverse association between exposure to anti-tobacco messages and tobacco use reported in one of the included studies has been found in some studies but not others.<sup>34</sup> The tobacco industry has targeted new markets in Africa with aggressive advertising, promotion, and sponsorship tactics.<sup>39</sup> This necessitates continued monitoring of anti-TAPS regulations and amending policies to respond to the industry's changing tactics. Some African countries that have implemented more comprehensive anti-TAPS policies with strict enforcement have seen a significant decrease in tobacco advertising and sponsorship exposure and cigarette smoking among young people over time.<sup>39</sup>

Ethiopia's ban on all direct and indirect forms of TAPS is an effective evidence-based policy strategy for reducing smoking prevalence and initiation across various settings.<sup>2</sup> Nevertheless, this can only work if accompanied by strict enforcement and compliance monitoring. This could be complemented by public health communication efforts highlighting the health risks of tobacco use.<sup>29</sup> The communication efforts would need to take into account the patterns of mass media use in Ethiopia. One of the included studies highlighted higher levels of radio use than other forms of mass media among adults.<sup>26</sup> However, these trends might have changed with time with the penetration of new forms of mass media platforms such as mobile phones and increased access to the internet, in low- and middle-income countries. In addition, there is a need to

consider gender-related differences or differences according to age or geographical area. For example, whilst the proportion of women aged 15 to 49 years that frequently watched the television or read a newspaper or magazine were 9% and 3.6%, respectively, in the study by Achia, <sup>26</sup> another study in Ethiopia reported that this was 20% and 12% among adolescent married women in Ethiopia.40 A study among adolescents in Hawassa City reported that the proportion with access to the internet was 45% for boys and 55% for girls; whilst the proportion who frequently watched the television was 62% for boys and 38% for girls.<sup>41</sup> In Hosanna Town, a study reported 100% access to the internet in a sample of adults over 18 years of age. 42 Although anti-TAPS policies have become more comprehensive in Ethiopia, there are still some loopholes that could be exploited by the tobacco industry such as the existing ability to use attractive packaging to enhance the appeal of their products and attract young smokers. 2,43 Mandating plain packaging could strengthen Ethiopia's anti-TAPS policies by reducing the attractiveness of tobacco products, removing the ability of the tobacco industry to use tobacco packaging for tobacco advertising and promotion or design packages in a way that may suggest that some products are less harmful than others; and increase the noticeability and effectiveness of health warnings.<sup>2</sup> Cote d'Ivoire recently became the first WHO Afro region country to mandate plain tobacco packs setting precedence for other African countries.44

The scarcity of research on TAPS in Ethiopia means several opportunities for research on the enforcement of and compliance with the TAPS policies. For example, studies could investigate compliance with bans on point-of-sale advertising and promotions in retail shops and tobacco product placement requirements, i.e., "behind or under the counter so that any customer may not directly grasp or see the product", as specified in the legislation. Product placement and point-of-sale price discount offers are some of the wellestablished tactics used by the tobacco industry to limit the impact of tobacco control strategies, such as reducing tobacco product affordability through increasing taxes and prices. 45 Also important to investigate are the barriers and facilitators to TAPS policy implementation, enforcement and compliance. Some of the barriers highlighted in the literature include limited capacity for enforcement, an informal economic sector, and tobacco industry interference, particularly where there are constitutional and legal constraints to comprehensive TAPS bans. 14 There is recognition that more needs to be done in this area, including on developing and testing strategies to overcome these barriers; and developing and testing effective, low-cost, and scalable strategies for enforcement and compliance. Awareness of the legislation among those who should comply and the general population also needs to be investigated and strengthened. The growth of global mass media is an additional complication to TAPS bans: the two studies in Ethiopia suggest that millions of people are exposed to tobacco imagery through YouTube films for example. <sup>27,28</sup> The challenges that this brings and strategies to address them need to be investigated. The impact of the 2019 legislation

in Ethiopia on the occurrence and exposure to TAPS, including in Ethiopian/ Amharic films that can be accessed on global mass or social media, also needs to be evaluated. This could be achieved, for example, through before and after comparisons using the analysis of past and future GATS, STEPs, or DHS surveys if the data allows it. Among these research priorities, the tobacco control stakeholders in Ethiopia ranked enforcement and compliance as the top priority. The following TAPS enforcement and compliance monitoring topics that were identified as top priority by the stakeholders in Ethiopia provide a starting point for researchers: 1) barriers and facilitators to policy implementation, enforcement, and compliance monitoring; and 2) developing and testing effective, low-cost, and scalable strategies for enforcement and compliance monitoring. Strengthening the evidence base for TAPS is even more important in countries such as Ethiopia, where the tobacco industry is expanding<sup>31</sup> and addressing the new tactics by these industries is needed.

#### STRENGTHS AND LIMITATIONS OF THE REVIEW

We used a comprehensive list of search terms. The searches were conducted in three of the main bibliographic databases for health-related research. We also attempted to identify gray literature and other studies that our searches might have missed by reviewing references in the identified studies and contacting key stakeholders. However, we might have missed some literature. Almost all the included studies were conducted before Ethiopia's current federal tobacco control legislation (Proclamation 1112/2019), 10 and the 2021 Tobacco Control Directive No. 771/2021, therefore the findings may not be indicative of the implementation of the provisions of the current TAPS laws in Ethiopia. We gave stakeholders two minutes to independently vote for their top research priorities in real-time during the stakeholder consultation meeting. This might have limited their ability to reflect on what had been discussed and gather more information to enable them to fully consider their choices. We took this approach to maximise the number of responses obtained.

#### **CONCLUSIONS**

The scoping review identified a lack of comprehensive evidence on TAPS in Ethiopia. As prioritised by the stakeholders, further research is needed to address compliance monitoring and enforcement of the TAPS laws in Ethiopia, specifically barriers and facilitators to policy implementation, enforcement, and compliance monitoring, and developing and testing effective, low-cost, and scalable strategies for enforcement and compliance monitoring.

#### ACKNOWLEDGMENTS

This scoping review was conducted as part of the Tobacco Control Data Initiative (TCDI). TCDI is a program that covers six African countries (the Democratic Republic of Congo, Ethiopia, Kenya, Nigeria, South Africa, and Zambia) and aims to understand their tobacco data needs, identify existing data, confirm gaps in available tobacco data, collect new data to fill those gaps, and develop tools to enable policymakers to use essential data more effectively to inform tobacco policy. The programme is led by Development Gateway: an IREX Venture (DG), a global non-profit organisation that specialises in data for development, in partnership with the University of Cape Town's Research Unit on the Economics of Excisable Products (REEP). We would like to extend our gratitude to the following DG Ethiopia country team members for their guidance, administrative & review support throughout the study: Winnie Awuor and Andrea Ulrich. In addition, we would like to express our sincere gratitude to all stakeholders who participated in our stakeholder consultation meeting and their organisations.

#### INSTITUTIONAL REVIEW BOARD STATEMENT

Ethics approval is not applicable for this study as this is a review and does not involve humans or animals.

#### INFORMED CONSENT STATEMENT

Informed consent is not applicable for this study as this is a review and does not involve humans or animals.

#### DATA AVAILABILITY STATEMENT

The data supporting the findings of this review are available within the paper and its supplementary materials.

#### **FUNDING**

This publication is based on research funded by the Bill & Melinda Gates Foundation (grant number INV-009670). The findings and conclusions contained within are those of

the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation.

#### **AUTHORSHIP CONTRIBUTIONS**

T.G.A., S.A.K. N.D.M., and R.K.D conceptualised the study; N.D.M. and T.G.A. designed the study methodology; N.D.M., T.C, T.G.A, S.A.K., and R.K.D collected and analysed the data; N.D.M. was responsible for oversight and supervision; N.D.M. and T.G.A. prepared the first draft of the manuscript; all authors reviewed and edited the manuscript. All authors have read and agreed to the published version of the manuscript.

#### COMPETING INTERESTS

The Bill & Melinda Gates Foundation had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results. The authors completed the Unified Competing Interest form at <a href="https://www.icmje.org/coi\_disclosure.">www.icmje.org/coi\_disclosure.</a> Docx (available upon request from the corresponding author), and declare no conflicts of interest.

#### CORRESPONDENCE TO:

Dr. Noreen Dadirai Mdege Seebohm Rowntree Building Department of Health Sciences, University of York Heslington York YO105DD UK

Email: noreen.mdege@york.ac.uk

Submitted: August 17, 2022 GMT, Accepted: October 13, 2022 GMT



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### SUPPLEMENTARY MATERIALS

### **Online Supplementary Document**

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