

TOBACCO SMOKING CESSATION:

LESSONS AND POLICY OPTIONS FOR SRI LANKA

JANUARY 2021

HEALTH & EDUCATION SERIES NO: 19

**SUNIMALEE MADURAWALA
CHATHURGA KARUNANAYAKE**



INSTITUTE OF POLICY STUDIES OF SRI LANKA

Copyright © January 2021
Institute of Policy Studies of Sri Lanka

ISBN 978-955-7397-24-5

National Library and Documentation Services Board -Cataloguing-In-Publication Data

Madurawala, Sunimalee

Tobacco Smoking Cessation: Lessons and Policy Options for Sri Lanka I
Sunimalee Madurawala and Chathurga Karunanayake - Colombo: Institute of Policy
Studies of Sri Lanka, 2021

42p.; 28 cm. - (Health & Education Research Series; No. 19)

ISBN 978-955-7397-24-5

- | | |
|---|------------|
| i. 362.296095493 DDC23 | ii. Title |
| iii. Karunanayake, Chathurga (co. author) | iv. Series |
| 1. Tobacco - Sri Lanka - Health aspects | |



Sunimalee Madurawala is a Research Economist at the IPS with research interests in health economics, gender and population studies. She holds a BA (Economic Special) degree with a first class and a Masters in Economics (MEcon) degree from the University of Colombo, Sri Lanka. She is also partly qualified in Chartered Institute of Management Accountants (CIMA-UK). She was selected as a Fellow for the Asia-Pacific Capacity Development on Gender and Macroeconomic Issues, held in Japan in 2011. sunimalee@ips.lk



Chathurga Karunanayake is a Research Officer at the IPS with research interests in behavioural economics, labour economics, infrastructure development and regulatory governance. She is a Guest Lecturer on Consumer Behaviour and Luxury Consumption Patterns. She introduced the novel concept of "decorative consumption" to the jargon of Economics. She holds a BA in Economics (Honours) and a Certificate in International Relations (CCIR) from the University of Colombo, and a DipLCM from the University of West London, UK. She is currently serving as a Council Member of the Sri Lanka Federation of University Women (SLFUW) and as a Member of the Sri Lanka Economic Association (SLEA). chathurga@ips.lk

Please address orders to:
Institute of Policy Studies of Sri Lanka
100/20, Independence Avenue, Colombo 7, Sri Lanka
Tel: +94 11 2143100 Fax: +94 11 2665065
Email: ips@ips.lk
Website: www.ips.lk
Blog 'Talking Economics': www.ips.lk/talkingeconomics
Twitter: @TalkEconomicsSL
Facebook: www.facebook.com/instituteofpolicystudies



INSTITUTE OF POLICY STUDIES OF SRI LANKA

Health & Education Research Series



Tobacco Smoking Cessation: Lessons and Policy Options for Sri Lanka

SUNIMALEE MADURAWALA AND CHATHURGA KARUNANAYAKE

Table of Contents

LIST OF TABLES	II
LIST OF FIGURES	II
LIST OF BOXES	II
ABBREVIATIONS	III
ACKNOWLEDGMENTS	IV
EXECUTIVE SUMMARY	V

1. Introduction	1
2. Research Questions and Methodology	4
3. Smoking Cessation, Approaches and Global Practices	5
3.1 System-level Smoking Cessation Interventions	6
3.2 Targetted Behavioural Smoking Cessation Interventions	8
3.2.1 Behavioural Smoking Cessation Interventions for Individuals	9
3.2.2 Group and Community-level Behavioural Smoking Cessation Interventions	9
3.3 Characteristics Associated with Quitting Successfully	10
4. Behavioural Economics, Smoking and Cessation	11
4.1 Behavioural Economics and Tobacco Use	11
4.2 Behavioural Economics and Cessation	12
5. Reaching the 'Hard to Reach Groups'	13
5.1 Barriers in Reaching 'Hard to Reach Groups'	14
6. Smoking Cessation in Sri Lanka	15
6.1 Smoking Cessation Programmes in Sri Lanka	16
6.2 'Strategy for Tobacco Cessation in Sri Lanka; 2020-2025'	18
7. Conclusion and Policy Implications	22
7.1 Smoking Cessation Support for the Last Mile Smokers	24
References	27
Annex	33

List of Tables

Table 1: Methodology, Tools and Data Sources	4
Table 2: Summary of Cessation Programmes in Sri Lanka	17
Table 3: Targetted Cessation Interventions - Evidence from Literature Review	22

List of Figures

Figure 1: Quitting from Tobacco Smoking by Former Smokers Among Ever Smokers - 2018	15
Figure 2: Reasons to Quit Smoking - 2018	15
Figure 3: Hierarchical Approach for Integrated Clinical and Population-based Interventions	21

List of Boxes

Box 1: Suite of MPOWER Policies	5
Box 2: Key Components of Approaching HRG Effectively	14
Box 3: Community Cessation Initiatives	20

Abbreviations

ADIC	- Alcohol and Drug Information Centre
CCT	- Centre for Combatting Tobacco
CI	- Confidence Intervals
FCTC	- Framework Convention on Tobacco Control
GRP	- Gross Rating Point
HRG	- Hard to Reach Groups
ICD	- International Statistical Classification of Diseases and Related Health Problems
KII	- Key Informant Interview
NATA	- National Authority on Tobacco and Alcohol
NRT	- Nicotine Replacement Therapies
PHI	- Public Health Inspector
PHMs	- Public Health Midwives
PPE	- Price Participation Elasticity
RCT	- Randomised Controlled Trial
SLMA	- Sri Lanka Medical Association
WHO	- World Health Organization

Acknowledgements

This study was conducted under the Institute of Policy Studies of Sri Lanka (IPS) Tobacco Control Programme, funded by the Cancer Research Institute, U.K. (CRUK). The authors wish to thank the CRUK for their support extended towards funding this project.

We wish to extend our sincere gratitude to Guy Lodge and Becky Hatch from KIVU International for their continuous support and guidance throughout the project. The authors are also grateful to Dr. Nisha Arunatilake, Research Director and the Lead Researcher for IPS Tobacco Control Programme, for her valuable guidance and insights throughout the study.

The authors also thank Dr. Sajeewa Ranaweera, Member, Expert Committee on Tobacco, Alcohol and Illicit Drugs, Sri Lanka Medical Association for reviewing the draft paper.

All experts and stakeholders who shared their thoughts during the Key Informant Interviews are acknowledged for dedicating their valuable time and sharing their experiences with us.

The support of the IPS publications team in bringing out this publication is also much appreciated. All other research and support staff members of the IPS, who helped us in various ways are also acknowledged.

Executive Summary

Sri Lanka has, in general, made important strides in reducing the overall smoking prevalence rate over time. However, if smoking prevalence is to decrease further, it is important that measures are taken to reduce the prevalence rate among residual smokers - the *Last Mile Smokers*. The *Last Mile Smokers* are the remaining groups in which the smoking prevalence rates are higher than the overall smoking prevalence rate in the country. *Last Mile Smokers* are, in general, less responsive to system-wide measures such as smoking and advertising bans as well as health awareness campaigns. As such, targetted smoking cessation policies and programmes play a vital role in supporting these groups to quit smoking effectively. However, given that tobacco products contain nicotine, a highly addictive drug on par with heroin and cocaine, smoking cessation is often a challenging task and a long-term process.

Using evidence-based cessation programmes significantly increase the likelihood of successfully quitting the smoking habit. As the World Health Organization (WHO) notes, in Sri Lanka, 51.8 per cent of the current smokers have attempted to quit smoking, while 35 per cent of users have been advised to quit tobacco usage by healthcare providers (WHO, 2018). Moreover, the quit ratio for daily smoking (i.e. the share of ever daily smokers, who quit smoking) was recorded as 34.4 per cent in Sri Lanka (WHO, 2018).

Smoking cessation interventions take different approaches and their effectiveness also vary. Different approaches in cessation should be used in different settings - and in combination with one another to improve effectiveness. Some cessation approaches are suitable only for specified contexts. The literature review clearly indicates that a behavioural approach in smoking cessation is more effective than pharmacological methods. Behavioural approaches have a significant influence on smoking cessation interventions and policies owing to the fact that tobacco smoking is an acquired behaviour. These behavioural approaches in cessation, boost or support motivation to resist the urge to smoke and develop smokers' capacity to stick to their resolutions. Furthermore, behavioural methods can work primarily with individuals, or with groups or communities.

In local settings, pharmacological approaches such as nicotine replacement therapies (NRT) (giving the smoker a small controlled amount of nicotine that reduces withdrawal feelings) are not advised or recommended by medical professionals. Owing to long-term adverse health impacts of NRT, most of the programmes that are currently in practice focus on a behavioural approach. As such, Sri Lanka's current efforts in tobacco cessation focus on changing the behaviour of people, by conducting diversified programmes namely; educational

and awareness programmes, training programmes for various groups, counselling programmes, national toll-free quit line and community-based programmes such as tobacco-free zones. Even though the measures taken by successive governments in controlling tobacco prevalence in the country are praiseworthy, still there are gaps in reaching the *Last Mile Smokers* - the smokers who have a high tobacco smoking prevalence rate. For instance, findings of the present study suggest that many existing cessation interventions such as programmes on counselling and awareness are centred in the most urbanised Colombo and its suburbs, and are therefore hardly accessible to most *Last Mile Smokers*. In addition, this study also confirms that more attention needs to be given in protecting the rural, low-income and estate sector smokers who are more vulnerable to tobacco industry tactics and get easily manipulated.

Penetrating the 'hard to reach groups' (HRG) is important and should be considered as a priority area to bring down the smoking prevalence among the *Last Mile Smokers* in Sri Lanka. Tailor-making smoking cessation interventions is a must when reaching the HRG. Moreover, promoting and allowing flexibility, accessibility, spontaneous actions and high visibility, and wider outreach are important elements of cessation programmes targetting the 'HRG'.

There are encouraging examples of good practice, but Sri Lanka needs to introduce increased and better-targeted cessation support for *Last Mile Smokers*, in formats that are appropriate in the Sri Lankan context.

The study reveals that current cessation support in the country is not sufficiently tailored to *Last Mile Smokers*, and as such, there is still room for improvement. Out of the two dominant approaches of tobacco smoking cessation in

Sri Lanka (community tobacco cessation, and clinical cessation), this study proposes that community-based behavioural support programmes are better at targeting the *Last Mile Smokers* and will be more effective. Two examples of such initiatives, which have potential, are tobacco-free zones and 'Creating Smokeless and Healthy Home Environment for Pregnant Mothers and Children' programme carried out by Public Health Inspectors (PHIs) and Public Health

Midwives (PHMs). In addition, this study also suggests considering a holistic approach in reaching the *Last Mile Smokers*, where the socioeconomic background of the smoker is taken into account, will make the quitting process much easier and appropriate. Finally, cessation support alone would not bring down the prevalence rate in Sri Lanka. As such, the study recommends cessation interventions to be combined with a suite of other policy reforms such as taxation going forward.

1. Introduction

Smoking cessation policies and programmes play an important role in effective control of tobacco smoking. Smoking cessation simply means the process of discontinuing tobacco smoking. Tobacco smoke contains nicotine, which is a highly addictive drug, on par with heroin and cocaine. Furthermore, as Roberts, Kerr & Smith (2013) note, smoking is a learned behaviour that results in a physical addiction to nicotine for the majority of smokers and the addictive nature of nicotine, thus, makes the process of smoking cessation, often challenging and a long-term strategy. Quitting tobacco is not easy, as tobacco dependence is a cluster of behavioural, cognitive and physiological phenomena (World Health Organization, 2019a). As asserted by the World Health Organization (2020), proper cessation support can more than double a tobacco user's chance of successful quitting. However, the case is much different in the absence of cessation support. According to the WHO, only 4 per cent of quit attempts would be successful without cessation interventions (WHO, 2020). Even though very few tobacco users can successfully quit the habit in their first attempt, evidence strongly indicates that with effective interventions quitting can be done successfully.

“Even though very few tobacco users can successfully quit the habit in their first attempt, evidence strongly indicates that with effective interventions quitting can be done successfully.”

There is a wide range of interventions that can help people quit smoking. Two major approaches of such interventions are (i) Population-wide/system-level interventions and (ii) Targetted cessation interventions. While population-wide methods primarily include the whole suite of MPOWER measures;¹ such as price bans, advertising bans and awareness campaigns; targetted evidence-based smoking cessation approaches include behavioural treatments and pharmacological treatments (U.S. Department of Health and Human Services, 2020). Behavioural

interventions consist of community-based programmes (for example, tobacco-free zones, educational/awareness campaigns), counselling programmes, quit lines (Levy, Tam, Kuo, Fong, & Chaloupka, 2018) and pharmacological interventions involve treatments such as NRT.

Troelstra, Harting, & Kunst (2019) assert that smoking cessation can be very difficult, since dependence on tobacco is based on a combination of behavioural, cognitive and physiological aspects. Further, weak dissemination of unappealing cessation products relative to the tobacco industry's intensive and attractive marketing results in many smokers harbouring misinformation about the safety and efficacy of treatments. Such practices would later lead to misconceptions among smokers tending to believe that new cigarette products may be less harmful (Truth Initiative, 2019).

Smoking cessation interventions reach smokers through different delivery channels. The literature on smoking cessation provides evidence on how effectively smoking cessation policies and programmes can contribute to quitting smoking. According to a study conducted by Soualakova & Crockett (2018), unassisted

¹ MPOWER includes a set of six cost-effective and high impact measures that are intended to assist in the country-level implementation of effective interventions to reduce the demand for tobacco, as ratified by the World Health Organization (WHO) Framework Convention on Tobacco Control (WHO, 2019).

quitting (i.e. quitting without pharmacological aids or other interventions) is the most common smoking cessation method among a majority of ex-smokers. Similarly, as indicated by Chapman & MacKenzie (2010), unaided cessation (approaches excluding any pharmacotherapy or any individual, group behavioural or cognitive intervention and involve interventions such as changes in tobacco tax, smoking restrictions, or public awareness campaigns designed to stimulate cessation) has brought in successful outcomes resulting in up to three-quarters of ex-smokers quitting the habit and as such, is by far the most common method used by most successful ex-smokers.

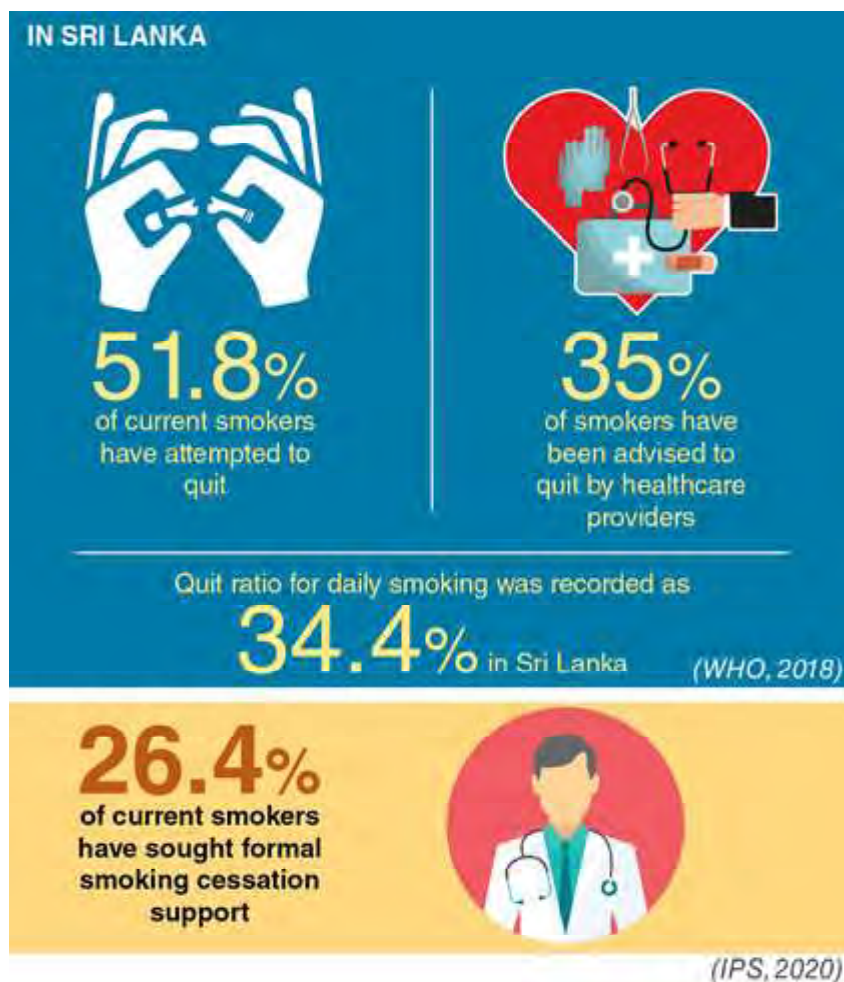
As asserted by the WHO, using evidence-based programmes significantly increases success, from almost double to as much as fourfold the cessation rate of quitting on one's own (WHO, 2019a). A recent study conducted in the USA has found that 12 million smokers looked up for online smoking cessation help annually and this is more than one-third of all smokers in the USA (Graham & Amato, 2019). The WHO estimates an 84 per cent increase in the chance of quitting successfully after being intensively advised by a physician (WHO, 2019a).

Quitting can be a huge challenge for many, as they have to simultaneously stop their

addiction, abandon comforting rituals and change their daily routine. In Sri Lanka, 51.8 per cent of the current smokers² has made quit attempts, and 35 per cent of users³ were advised to quit tobacco by health care providers (WHO, 2018). Quit ratio for daily smoking⁴ was recorded as 34.4 per cent in Sri Lanka. Only 26.4 per cent of current smokers have approached for formal smoking cessation support (Madurawala, Karunanayake, & Thilanka, 2020).⁵

Sri Lanka has already introduced a wide range of measures (these approaches will be discussed in depth at latter sections of the report) to support people to stop smoking. However, due to issues in targetting and outreaching, there is an unmet demand for tobacco cessation in the country, especially among the *Last Mile Smokers* (Madurawala, Karunanayake, & Thilanka, 2020).

The *Last Mile Smokers* in Sri Lanka include males above 40-



² Among current smokers and former smokers who have been abstinent for less than 12 months in the past 12 months.

³ Among those smokers who visited a healthcare provider in the past 12 months.

⁴ From the former daily users, people who quit smoking tobacco.

⁵ It should be noted that this number is not from a representative sample, but derived from the focus groups participants.

year old, non-schooling youths in 15-24 age category, male students in the age group of 16-17, those in Nuwara Eliya, Vavuniya, Mullativu, Mannar, Kilinochchi Districts, households from the rural sector, households in the lowest wealth quintile and 'skilled agricultural and fishery workers' and 'craft and related workers' occupational groups have more current smokers over the other occupational groups (Madurawala & Karunanayake, 2020). The *Last Mile Smokers* are particularly hard to reach. Evidence from literature indicates that globally, low-income people (American Public Health Association, 2017), workers in the fishery, agricultural, and construction-related occupations (Sudarmin, et al., 2019) and males those who are older (Sreeramareddy, Pradhan, Mir, & Sin, 2014) are more vulnerable to have a higher smoking prevalence. As such, empirical evidence on global experiences suggests that best efforts are carried out on bringing

“It is imperative to understand what policy measures and programmes work best for the *Last Mile Smokers*, so that effective cessation options can be offered to lower the smoking prevalence among them.”

down the incidence rates among the remaining stock of smokers, which is quite similar to the case of *Last Mile Smokers* in Sri Lanka.

In reaching the *Last Mile Smokers*, it is imperative to understand what policy measures and proactive public sector programmes work best for this group so that, effective cessation options can be offered to lower the smoking prevalence among the *Last Mile Smokers* in Sri Lanka.

In this backdrop, the present study focusses on targeted behavioural cessation interventions, explores the experiences of other countries in implementing effective smoking cessation policies. In addition, this study identifies suitable cessation policies in the local context and those that will be beneficial in further bringing down the tobacco smoking prevalence rate in Sri Lanka, especially among the *Last Mile Smokers*.

2. Research Questions and Methodology

This study aimed at answering the following research questions:

- **What is the latest evidence from behavioural economics on smoking cessation?**
- **What are the international best practices on smoking cessation?**
- **How to approach the behaviour of 'HRG'?**
- **What is the current position of Sri Lanka in smoking cessation?**

- **What are the policy options for Sri Lanka on cessation?**

In light of the above, the main methodological approach followed in answering the research questions is carrying out a literature review. In this study, a semi-systematic review was carried out. A semi-systemic approach enables to identify the state of knowledge, themes in literature, theoretical models and to provide a historical overview (Snyder, 2019). Accordingly, this study seeks to identify research studies which are potentially

relevant and have implications for the study topic and to synthesise these using meta-narratives instead of measuring the extent of the effect (Wong, Greenhalgh, Westhorp, Buckingham, & Pawson, 2013).

Table 1 summarises methodologies and data sources used for each research question.

Table 1
Methodology, Tools and Data Sources

Research Question	Methodological Approach and Techniques	Data Sources
What is the latest evidence from behavioural economics on smoking cessation?	Semi-systematic review approach	Most recent journals, research papers, policy papers, reports and other relevant documentation pertinent to cessation policy in smoking in both developed,developing nations and those who are comparable to Sri Lanka.
What are the international best practices on smoking cessation?	Thematic analysis and content analysis	
How to approach the behaviour of 'hard to reach groups'?		
What is the current position of Sri Lanka in smoking cessation?	Content analysis	Key Informant Interviews (KIIs)*
What are the policy options for Sri Lanka on cessation?	Content analysis	KIIs

Note: KIIs were carried out with respective stakeholders with a mixture of policymakers, academicians, health professionals and other relevant professionals (Annex 2).

3. Smoking Cessation, Approaches and Global Practices

The addictive and dependent nature of nicotine is one of the main characteristics of a cigarette that makes the quitting process often a difficult and a lengthy one. The effects of tobacco and nicotine to produce dependence and withdrawal, are identified by the International Statistical Classification of Diseases and Related Health Problems [I.C.D-10] as a disease in the category [T 65.2] 'Toxic effect of other and unspecified substances'⁶ (WHO, 2019). According to the WHO, dependence on nicotine is a biological force that drives smokers to self-dose for nicotine.⁷

Smoking cessation interventions take different approaches.

- **Population/system-level interventions:** these include the whole suite of MPOWER measures (Box 1), including price bans, advertising bans, awareness campaigns etc.
 - **Price controls** aim to reduce smoking incidence by changing the price or increasing taxes on tobacco-related products.

- **Non-price-based smoking cessation legislations** include smoking restrictions in workplaces, public places, bans on tobacco advertisement and raising the legal age of smokers. These aim to make smoking less convenient and less socially acceptable.
- **Preventive/awareness-raising approaches** focus on health promotional activities, such as mass advertising campaigns in the media,

peer education programmes and community mobilisation.

- **Targetted smoking cessation interventions,** which can be mainly identified into two classes:
 - **Pharmacological methods:** pharmacotherapy approach aims primarily to reduce the intensity of the urge to smoke and/or adjust aversive symptoms.
 - **Behavioural methods:** behavioural support aims

Box 1 Suite of MPOWER Policies

The MPOWER Package

- | | |
|----------------|--|
| Monitor | - Monitor tobacco use and prevention policies |
| Protect | - Protect people from tobacco smoke |
| Offer | - Offer help to quit tobacco use |
| Warn | - Warn about the dangers of tobacco |
| Enforce | - Enforce bans on tobacco advertising, promotion and sponsorship |
| Raise | - Raise taxes on tobacco |

Source: World Health Organization. (2019b). *WHO Report on the Global Tobacco Epidemic, 2019*. Geneva: World Health Organization.

⁶ Other effects in this category include: Cyanides, Strychnine and its salts, Nitro derivatives and amino derivatives of benzene and its homologues, Carbon disulphide, Nitroglycerin and other nitric acids and esters, Paints and dyes, not elsewhere classified and Toxic effect of other specific substances.

⁷ "Such behaviour is manifested in smoking more intensively or more cigarettes per day to obtain the dose that will give the smokers satisfaction when using so called 'low-yield' cigarettes. These cigarettes are promoted using terms, descriptors, trademarks or other signs that directly or indirectly create the false impression that the tobacco product is less harmful than other tobacco products. Most of these products are designed such that these changes in smoking behaviour return the delivery of nicotine and other smoke constituents to levels similar to those of so called 'full-flavour' or 'high-yield' cigarettes" (WHO, 2019).

to boost or support motivation to resist the urge to smoke and develop smokers' capacity to stick to their resolutions. Behavioural techniques can work primarily with **individuals**, or with **groups or communities**.

Different approaches in cessation should be used in different settings - and in combination with one another. Different types of intervention will work better with different types of people, with different smoking histories and behaviours. Some cessation approaches are suitable only for specified contexts (e.g. price bans and advertising bans are more suitable for trying smokers but for more intensive smokers, approaches such as a behavioural or a pharmacotherapy approach are more appropriate).

The two main approaches that come under targetted cessation support are pharmacotherapy and behavioural support (Aveyard & Raw, 2012; WHO, 2014a). While pharmacotherapy approach aims primarily to reduce the intensity of urge to smoke and/or ameliorate the aversive symptoms, behavioural support aims to boost or support motivation to resist the urge to smoke and develop people's capacity to implement their plans to avoid smoking. Research suggests that smoking cessation policies need to be sensitive to culture and gender related aspects (Goings, Hidalgo, & McGovern, 2017). For example, behavioural treatment approaches to smoking cessation such as individual, group and telephone counselling through several

“Different cessation approaches should be used in different settings - and in combination with one another.”

platforms, may be beneficial in increasing smoking cessation among low-income populations and populations with behavioural health conditions (U.S. Department of Health and Human Services, 2020). For tobacco cessation interventions that take place at the school or community level, restrictions on advertising and mandatory health warnings on packages are effective in smoking cessation among youth and individuals in the lower-income cohort (National Institute on Drug Abuse, 2020). Further, using social media and influencers to reach and engage teenagers in dialogue about smoking has proven to be useful in quitting among the target group (Larsen, 2020). These empirical studies lead to the inference that policy interventions that aim smoking cessation require to be tailor-made to suit different groups under different settings.

This study focusses on system-wide interventions and targetted behavioural interventions.

3.1 System-level Smoking Cessation Interventions

System-level tobacco control measures have shown to be effective at discouraging new smokers at reducing social acceptability of smoking and in reducing overall prevalence rates. As exemplified in the U.S. Department of Health and Human Services (2014), practices which affect the behaviour of people namely; mass media campaigns, comprehensive community programmes, and comprehensive state-wide tobacco control programmes prevent initiation of tobacco use and reduce the prevalence of tobacco use among youth and adults in the United States. Other measures, such as the size of the cigarette package has a significant impact in terms of controlling smoking; as such, people who buy small cigarette packs are less prone to be daily smokers, smokeless per day and are less addicted in the case of United States (Marti & Sindelar, 2015).

Tobacco taxation is one of the system-level interventions taken in tobacco cessation globally (Roberts, Kerr, & Smith, 2013) and is considered to be an effective and potential self-controlling device that aids smokers' behaviour towards quitting smoking (Nagelhout, Zhuang, Gamst, & Zhu, 2015). Similarly, as asserted by Levy, Tam, Kuo, Fong, & Chaloupka (2018), while comprehensive smoke-free air laws, tobacco control programmes, banning all tobacco advertising, promotions, sponsorships have a role to play

in reducing smoking prevalence; large increases in cigarette taxes relative to initial prices continue to be the most potent policy in terms of successful quit attempts and cessation, especially in high-income countries. Most economists consider external and quasi-external costs when suggesting optimal tobacco taxes. However, economists often do not recommend taxes that will offset the private costs because they assume that smokers are aware of the harmfulness (Cherukupalli, 2010).

Despite their impact on initiation and overall prevalence rates, some studies point out that system-level measures are less effective in terms of getting existing smokers to quit (cessation). Wilson, et al. (2012) carried out a systematic review on countries including Sri Lanka, China, South Africa, USA, Canada, Mexico, Australia and many other low-income and middle-income countries. Consequently, the study found out that the only system-level intervention which has moderate evidence for cessation is, 'increasing the price through taxation' and all the other considered interventions (such as smoking bans, advertising and sponsorship bans, health warning labels and mass media campaigns) had either low or insufficient evidence for impact on cessation.

However, broader campaigns and awareness programmes are

“Tobacco taxation is one of the system-level interventions taken in tobacco cessation globally and is considered to be an effective and potential self-controlling device that aids smokers' behaviour towards quitting smoking.”

proven to be effective in terms of changing the behaviour of tobacco smokers in some cases. For instance, programmes such as 'Stoptober' initially started in the UK to encourage people to stop smoking for 28 days in October, is proven to be successful in creating a national collective effort as a stepping stone for permanent cessation in smoking (Kuipers, West, & Beard, 2019). This programme has also

improved the quitting rates and quit attempts in the month of October even though this requires sufficiently a high budget for implementation.

According to Schar & Gutierrez (2001), media campaigns play a dominant role in creating an environment that supports smoking cessation, becoming the stimulus for new thought and perspective on tobacco policies and change. For instance, media campaigns which were conducted along with other cessation programmes in nine countries⁸ and six states of the USA⁹ suggest that substantial contributions from media campaigns played a significant role. It contributed in working out comprehensive cessation programmes in the success of cessation programmes which ultimately assisted in changing the smoking behaviour of people. According to Schar & Gutierrez (2001), a variety of ads should be introduced over time with variations and innovative ideas, which would attract and engage different groups of smokers.

However, Schar & Gutierrez (2001) assert that changing the behaviour of people through broader smoking cessation campaigns largely depends on the effectiveness of other smoking cessation interventions which are in place (legislative changes, educational programmes, treatment programmes, grassroots activism, and media campaigns).

⁸ Australia, Canada, France, Iceland, New Zealand, Philippines, Poland, Singapore and the UK.

⁹ Arizona, California, Kansas, Massachusetts, Minnesota, and Oregon.

3.2 Targetted Behavioural Smoking Cessation Interventions

Past studies evidently prove that cessation interventions that are tailor-made to suit different socio-demographic cohorts such as diversified race/ethnicity, culture, age, gender, education and income are effective in terms of achieving higher quitting rates. The need for development of targetted cessation interventions is highlighted in many research studies. As asserted by Matthews, Sánchez-Johnsen, & King (2009), targetted cessation interventions that consist of information relevant to the intended audience can address the barriers to change in smoking behaviour. For instance, Wijk, Landais, & Harting (2019) reveal that, when targetting those who are in the low-income group, it is crucial to identify their poor living conditions, which will assist in improving access to cessation support. According to Chun (2019), counselling is more effective for adolescents. Likewise, mobile health interventions such as text messages are useful in assisting high-school pupils in quitting smoking and is a novel and a cost-effective approach (Thomas, Bendtsen, Linderorth, & Müssener, 2018). In terms of tailor-making cessation programmes for older males, research suggests that medical support is beneficial. This can be due to reasons as older

aged smokers can be significantly influenced by ill-health, provision of more daily care support etc., which are driven by greater social pressure to quit smoking, where more social contact and more external control over cigarette use are beneficial (Cohen-Mansfield, 2016). Furthermore, according to past studies, for blue-collar jobs such as construction workers, and those in the fishery industry, more aggressive cessation support interventions such as more aggressive promotion of smoking cessation programmes and workplace rules prohibiting smoking are required. The reasons being that their jobs by nature, do not possess formal workplaces and do not have access to workplace-oriented cessation programmes, smoke-free laws in the workplace and workplace smoking policies (Ham, et al., 2011).

Behavioural cessation support and medication can increase the likelihood that a smoker will quit successfully. Offering help to stop/reduce tobacco use is one of the major six policy components of the WHO's MPOWER policy package.¹⁰ Treatment of tobacco dependence is a key component of any comprehensive tobacco control strategy, as indicated in Article 14 of the WHO Framework Convention on Tobacco Control (WHO FCTC). Treatment may include various methods, but programmes should consist of: tobacco cessation advice incorporated into primary and routine health-care services,

“Cessation interventions that are tailor-made to suit different socio-demographic cohorts are effective in terms of achieving higher quitting rates.”

easily accessible and free telephone helplines (known as toll-free quit lines) and access to free or low-cost cessation medicine (WHO, 2019).

In terms of comprehensive smoking cessation policy, an integrated approach is recommended at individual and systems levels (Pasquale, DiPiazza, Cappello, Demma, & Maglia, 2019). Such an approach would capitalise on all proven cessation components and provide a continuum of care to achieve the main three goals of a smoking cessation policy; (1) proactively reach more smokers and create strong consumer knowledge, motivation and demand for cessation, (2) make the full range of proven cessation treatments accessible and freely available in a coordinated, aligned

¹⁰ MPOWER is a policy package intended to assist in the country-level implementation of effective interventions to reduce the demand for tobacco, as ratified by the WHO FCTC. Other policy areas emphasised by the MPOWER package are monitoring tobacco use and prevention policies, protecting people from tobacco smoke, warning about the dangers of tobacco, enforcing bans on tobacco advertising, promotion and sponsorship and raise taxes on tobacco.

delivery system of comprehensive care management, and (3) establish a coherent, unified national policy for the integration of all effective components that enhance cessation into a comprehensive system of care management.

3.2.1 Behavioural Smoking Cessation Interventions for Individuals

Given the hazardous consequences of tobacco use, numerous interventions and behavioural practices are followed globally, to prevent tobacco smoking and promote cessation. This section looks regarding evidence on behavioural support at the individual, group and community level.

According to prevailing empirical evidence, behavioural practices such as in-person behavioural support, telephone counselling and self-help materials assist in controlling tobacco smoking among non-pregnant women aged 18 years and above, are proven to be substantial practices in smoking cessation and smoking abstinence in the United States (American Family Physician, 2016). Modes of delivery of behavioural smoking cessation interventions also include; utilising smart techniques (e.g. using smart phones through sending out text messages for instance, 'txt2stop' and 'txt2Quit' which have been developed using motivational messages), self-help means (e.g. manuals or structured programmes that are used by individuals without the help of health professionals), trained

counsellors and support groups covering a spectrum of formats such as audio recordings, videos/ DVDs, and web/internet-based material (Roberts, Kerr, & Smith, 2013).

Findings revealed by Rosen & Sockrider (2019), motivating and encouraging people to quit smoking while addressing their barriers to quit, is helpful in achieving smoking cessation, especially among adolescents. The study by Park (2019) affirms that content of the behavioural therapies requires inclusion of education on withdrawal symptoms, identification of triggers, educating people on problem-solving and coping skills and finally providing them stress management and relaxation strategies.

3.2.2 Group and Community-level Behavioural Smoking Cessation Interventions

Empirical evidence suggests that behaviour therapy programmes delivered in a group format also play a major role in tobacco smoking cessation. As indicated by Stead, Carroll, & Lancaster (2017) in their study, groups are better than self-help and other less intensive interventions, in promoting smoking cessation among people; however, advice from a health care provider may be more effective at times.

Past research studies on tobacco cessation lead to the inference that individual attempts are relatively unsuccessful in terms of quitting tobacco smoking

“Behaviour therapy programmes delivered in a group format also play a major role in tobacco smoking cessation.”

compared to low-cost community-based interventions (Caponnetto, et al., 2019; Zwar, Mendelsohn, & Richmon, 2014). For instance, according to the WHO (2005), pilot projects on community-based cessation are considered to be effective in the South East Asian Region and the efficacy of such programmes depends on the design and channels of implementation. The WHO asserts that such programmes should be designed and implemented in educational and health institutions, health care facilities, workplaces and sporting environments. Furthermore, according to Murthy & Saddichha (2010), community-based mass approaches with minimal sustained interventions are prone to be more effective in India compared to clinic-based, intensive and individual approaches.

Tobacco Free Kerala (2018) affirms that getting the assistance of religious leaders in influencing people to stop smoking through initiating smoke-free villages remains a successful approach in tobacco smoking cessation.

Moreover, the aforementioned community-based approach has resulted in shutting down of six shops (out of 13) in the village, which used to sell tobacco and instead of switching to farming while the remaining shops continued their business without selling tobacco. Similarly, a study conducted by Chatterjee, Patil, Kadam, & Fernandes (2017) reveals that the 'Tobacco Free Village' programmes conducted in Maharashtra state in India, claim to be successful as their perceptions were reshaped with strong local leader involvement, ownership of the programme, and commitment to the cause by residents. Furthermore, the community-based smoke-free home programme in Indonesia, which is also the first to be initiated in South East Asia, affirms that the programme redefined smoking as a health issue among women and children. In addition, it also incorporated family welfare to core cultural values, and offered women a leadership role in tobacco control and thus was successful (Padmawati, Prabandari, Istiyani, Nichter, & Nichter, 2018).

3.3 Characteristics Associated with Quitting Successfully

The effectiveness of cessation support varies on the method used, but also depends on the characteristics of the people receiving support. In brief, different characteristics affect how a smoker is likely to quit successfully. For instance, multiple factors need to be taken into account when choosing the best strategy to help smokers to

quit such as socio-demographic cohorts of those who smoke, as different characteristics affect how a smoker is likely to quit successfully.

Evidence suggests that people initiate smoking during their adolescence and youth and the decision to smoke is mostly driven by the factors such as exposure to advertising on social media, magazines, low socio-economic background, influence by friends and having smokers in the family (Efendi, Aidah, Has, Lindayani, & Reisenhofer, 2019). In addition to aforementioned reasons that impact young smokers to be less likely to quit include insufficient parental and family support, mental stress, fear of peer rejection, drug/alcohol use and desire to experiment new things. Research studies also confirm that cessation support namely; individual counselling, psychological support combined with school-based cessation programmes, cessation intervention through text messages and social media (smoke-free texting and smoke-free social-media) are effective in promoting cessation among youth and adolescents (Tucker, et al., 2020; Harvey & Chadi, 2016).

Research suggests that older males are less likely to quit smoking compared to the youth (Jordan, et al., 2017); strategies such as face-to-face interventions, continuous follow-ups on smokers, physician-delivered interventions and behavioural interventions can be utilised to generate higher cessation rates among older smokers who are 50 years and

above (Chen & Wu, 2015).

In terms of helping males to quit smoking, (by being a good father, being a healthy father and a role model), making smokers realise the loss they cause to family finances through interactive smoke-free calculators which prompt smoking men to enter the number of daily cigarettes they smoked and the cost per carton are effective (Bottorff, et al., 2017).

Past evidence also suggests that culturally appropriate community-based national plans and programmes facilitate smoking cessation among minority male smokers (Daoud, et al., 2018).

For economically advantaged smokers, smoke-free text message (free of charge), providing support in developing coping skills and motivation and counselling through telephone calls are effective (Slomski, 2019). However, the case is much different in terms of those who fall under the low-income cohort. According to empirical evidence, many low-income smokers reside in communities where cessation support has not effectively reached, and as such, they have fewer chances to quit. Haskins (2017) asserts that approaching low-income cohorts are quite challenging as these smokers can be easily influenced by market forces and strategies. These includes reducing the density of tobacco retailers and quit lines which connect smokers to free quit coaching. Most importantly, educating those people on the existence and access of such programmes are essential in helping them quit.

4. Behavioural Economics, Smoking and Cessation

Behavioural economics is a theoretical scientific framework which focusses on linking psychological aspects into the economic and financial decision-making processes and forecasting models that would connect the subjectivity evidenced by individuals in real contexts (Costa, de Melo Carvalho, & de Melo Moreira, 2019). Recent studies show that, behavioural economics has gained attention not merely in the field of psychology but also in public policy, climate change and especially in the health sector; this has become a dominant aspect in many disciplines in terms of encouraging and provoking sustainable and positive changes in one's behaviour (Cassidy & Kurti, 2018).

Evidently, research pertaining to this dimension, have dominantly focussed on interventions for healthier living (Michie & Williams, 2003; Prince, Carey, & Maisto, 2013); in addition, it explored on approaches for controlling and diminishing undesired behaviours (Lunze & Paasche-Orlow, 2013) and focussed on developing policies pertaining to governments and institutions that favour the society at large (Avineri, 2012; Siva, 2010). Furthermore, as exemplified by Gino (2017), behavioural

economic approach to research will be of immense value in making significant changes for the betterment of mankind- be it smoking, savings, honesty and healthy eating; the only acknowledgement that have to be made by victims is to understand that human behaviour is full of anomalies.¹¹

4.1 Behavioural Economics and Tobacco Use

Behavioural economics plays a pivotal role in the course of tobacco usage. Literature suggests that tobacco usage has a significant impact on the users' behavioural aspects in day-to-day life. Tobacco use is most often studied by economists assuming that users act in their best interest (Cherukupalli, 2010). Furthermore, it is also important to note that, behavioural aspects and tobacco usage are inter-linked; as such, on the one hand, changes in human behaviour can affect the tendency of tobacco usage; on the other hand, tobacco usage could affect human behaviour. For instance, as asserted by Costa & Esteves (2018) in their study on cigarette smoking and sleep disturbance, tobacco usage causes sleep disturbance and deprives its users of sleep through the

influence of nicotine in sleep-wake cycle neuron. Their study further reveals that tobacco users go through many hazardous issues pertaining to their sleep namely, failing to have a proper sleep, feeling sleepy in daytime quite often and having longer latency to sleep onset when compared to tobacco non-users. Rondina, Gorayeb & Botelho (2007) were of the view that tobacco smokers are more inclined towards being extroverts, anxious, tensed, impulsive and exhibits more attributes of neuroticism and psychoticism compared to people who used to smoke previously those who have quit now or among non-smokers. As exemplified in Giannakopoulos, et al. (2010), smoking is related to greater levels of emotional/behavioural problems. As revealed in their study, it is evident that it is often the same individuals who engage in risky behaviours such as smoking that possess emotional/behavioural difficulties that in return aggravate the harmful effect on human health.

People use tobacco for many reasons and as evidently reported in prevalent studies, personality traits carry substantial weight in this regard. As revealed in the study of Zuckerman & Kuhlman (2000), personality traits such as; sensation seeking¹² possessing a

¹¹ Annex 2 provides an in-depth theoretical description of 'Behavioural Economics'.

¹² According to Zuckerman & Kuhlman (2000) as cited in Rondina, Gorayeb, & Botelho (2007), this involves searching for new, varied, complex and intense sensations and experiences, together with the predisposition to take physical, social, legal, and financial risks in order to have such experiences.

very low conscientiousness factor,¹³ openness to experiences, neuroticism¹⁴ or being nervous in behaviour are few such dominant reasons behind tobacco usage among people. According to them, personality traits such as conscientiousness can assist in refraining from tobacco use. These can be due to the reason that people who are conscientious possess self-control and therefore, have the ability to control impulsive behaviours; as such, they are less prone towards tobacco usage compared to people who have very low conscientiousness. Similarly, Hampson, Andrews, Barckley, Lichtenstein & Lee (2000) assert that conscientiousness can act as a mediating factor concerning a person's view on risk. For instance, a person can agree that tobacco use or smoking is a health hazard and yet fails to quit smoking owing to lack of self-discipline, which hinders the modification of smoking behaviour.

As mentioned earlier, tobacco usage also affects the behavioural aspects of its users. Moreover, economists attempt to discover the evidence for tobacco use as risk-taking behaviour, lower awareness of harmfulness and lower investment made for future (Cutler & Srikanth, 2003; Munasinghe & Sicherman, 2006). The literature on behavioural economics suggests that due to the fact that smoking is a lifelong

activity where long-term decision regarding savings, education and health-related aspects are to be analysed through discounting (Cherukupalli, 2010).

4.2 Behavioural Economics and Cessation

Past studies suggest that smoking is an acquired behaviour and as such, behavioural economic theories have a significant influence on smoking cessation interventions and policies (Tapera, et al., 2020; Tidey, Cassidy, Miller, & Smith, 2016). Habit-forming and addictive behaviours of individuals and their biological and psychological dimensions are addressed through several clinical and public health policies (Cherukupalli, 2010). Since biological dimensions are beyond the scope of economists, these often determine the preferences of individuals in markets such as the tobacco market; in addition, how these preferences are transformed into demand behaviours, thus, interact with supply to derive prices (Cherukupalli, 2010). Even though the harmfulness of tobacco is known to individuals, people tend to behave rationally in the market for tobacco products. This is often reflected by the individual's rational behaviour in response to market prices of tobacco, consumption declines as price

“Behavioural economic theories have a significant influence on smoking cessation interventions and policies.”

hikes (Guindon, Paraje, & Chaloupka, 2015; National Cancer Institute in collaboration with WHO, 2017).

Interventions similar to advice, discussion, encouragement and other activities designed to help quit attempts are directly linked with the above-mentioned behavioural economic models (Roberts, Kerr, & Smith, 2013). Behavioural economic literature emphasises the vitality of enriching interventions with the self-regulatory capacity and skills of individuals. According to prevalent studies, interventions should be tailored to individual requirements (Lai, Cahill, Qin, & Tang, 2010; Michie, Churchill, & West, 2011). It should be noted that behavioural techniques on tobacco concession are complex and multidimensional.

¹³ According to Hampson, Andrews, Barckley, Lichtenstein, & Lee (2000), this trait can be explained as being conscientious, careful, reliable, willing, well-organised, meticulous, scrupulous, self-disciplined, tidy/neat, punctual, practical, energetic, connected to work/business, informed and perseverant.

¹⁴ Neuroticism involves feelings such as; being temperamental, insecure, impatient, not relaxed, emotional, vulnerable, and unstable, among other aspects.

5. Reaching the 'Hard to Reach Groups'

Addressing the issue of 'hard-to-reach groups (HRG)' within the society (i.e. groups that are not currently engaging in any form of cessation support services and where prevalence rates remain stubbornly high) is essential. When engaging with HRGs in health promotion, a carefully outlined strategy should be followed to reach successfully the targetted group (Liljas, et al., 2019).

The KIIs conducted with the stakeholders revealed that HRG in Sri Lanka is shaped by the ones which are not covered under any formal institution or formal network (e.g. construction workers, drivers, other informal workers, school leavers). When working with smokers who are challenging to engage, it is crucial to learn how to approach the subject non-judgmentally to discover if they have any interest in quitting. Therefore, having an understanding of this kind helps to provide tailored advice on services and treatments available. In addition, it is also vital to identify windows of opportunity, where smokers may be more receptive to changing their behaviour. For instance, it has been observed that this approach would work well in hospital settings where inpatients may be much more open to health promotion advice, even if they have previously ignored it (Bickerstaffe, 2014). Moreover, for many people, being admitted to the hospital provides the rationale for change (Kopsaftis, Agteren,

“Hard to Reach Groups in Sri Lanka is shaped by the ones which are not covered under any formal institution or network.”

Carson, O'Loughlin, & Smith, 2017).

Studies conducted on HRGs highlight that, fear of being judged and lack of knowledge about existing services may be barriers to access and that smokers value flexibility and accessibility in cessation services (Venn, et al., 2016). When reaching the HRGs, service models that are compatible with spontaneous action, high visibility and accessibility to trigger as well as immediately support such attempts are essential. Alternatives to the one-to-one appointment model, such as drop-in sessions, telephone support and sessions in non-health-related settings are effective ways in reaching the HRGs. Further, having a flexible and community-

based approach, using lay advisors and venues that can fit into the smokers' daily routines and not requiring to get appointments are some of the key features that HRG smokers find attractive (Venn, et al., 2016).

When reaching the disadvantaged groups, utilisation of social marketing techniques and tailoring interventions to populations to make the approach more 'client-centred', both these have been suggested to play a role in making smoking cessation interventions. It is assumed that interventions of this type are more relevant to the needs of the individual smoker and thus, is more effective. Likewise, combining smoking cessation interventions with other interventions shows promise for improving effectiveness; however, evidence is limited to other health-care interventions and has not examined the effect of combining smoking-cessation interventions with other non-healthcare services (Murray, Bauld, Hackshaw, & McNeill, 2009). Passey and Bonevski (2014) highlight the key benefits of focussing on marginalised groups in doing tobacco research; better understanding of factors driving differences in smoking and quitting rates, an evidence base for delivery of tobacco dependence treatments according to social or cultural contexts as well as to ensure that population-wide tobacco control policies are reducing disparities (Passey & Bonevski, 2014).

5.1 Barriers in Reaching Hard to Reach Groups

Vulnerable groups or HRG experience common barriers as well as barriers that are unique to specific groups to smoking cessation. Barriers common to all vulnerable groups include smoking for stress management, lack of support from health and other service providers, and the high prevalence and acceptability of smoking in vulnerable communities. Unique barriers for specific groups are; maintenance of mental health for people with mental illness, cultural and historical norms for indigenous groups, living conditions for prisoners, competing priorities for homeless people and high accessibility of tobacco for youth-at-risk (Twyman, Bonevski, Paul, & Bryant, 2014). According to Murray, Bauld, Hackshaw, & McNeill (2009), barriers for smokers from lower socioeconomic groups to access cessation services include fear of being judged, fear of failure and lack of knowledge. These

researchers have highlighted the importance of having multidimensional interventions in order to tackle social and psychological barriers to quitting as well as dealing with physiological addiction. Given that providing help to stop smoking is the most clinically proven, cost-effective, preventive action that healthcare professionals can undertake, it is essential to have means and ways of accessing all segments and subgroups (West, McNeill, & Raw, 2000).

As mentioned previously in this report, in the context of Sri Lanka, *Last Mile Smokers* tend to work in the informal sector, making it harder to reach them; they have lower levels of education and lower access to mass media and social media. Box 2 below summarises the key components which are needed in approaching the HRG or the *Last Mile Smokers* in Sri Lanka successfully.

Box 2 Key Components of Approaching HRG Effectively

- High visibility and accessibility
- Non-judgmental approach
- Spontaneous action
- Flexibility
- Community-based approach
- Using lay advisors and venues that fitted into the smokers' daily routines

Source: Compiled by authors based on the literature survey and the KIIs.

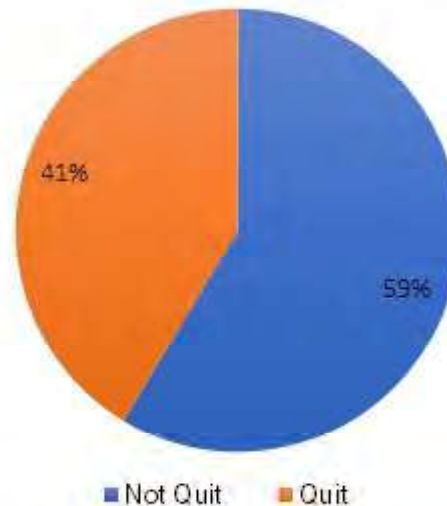
6. Smoking Cessation in Sri Lanka

According to the WHO, 51.8 per cent of the current smokers in Sri Lanka have made quit attempts and 35 per cent of current smokers were advised to quit tobacco smoking by a health care provider (WHO, 2018). Tobacco Spot Survey for 2018 conducted by the Alcohol and Drug Information Centre (ADIC) revealed that a considerable proportion (i.e. 41 per cent) of ever male smokers (who have smoked during their lifetime) had quit smoking at the time of the survey (Figure 1) (ADIC, 2019).

“Reasons for quitting differ with the age of the smokers.”

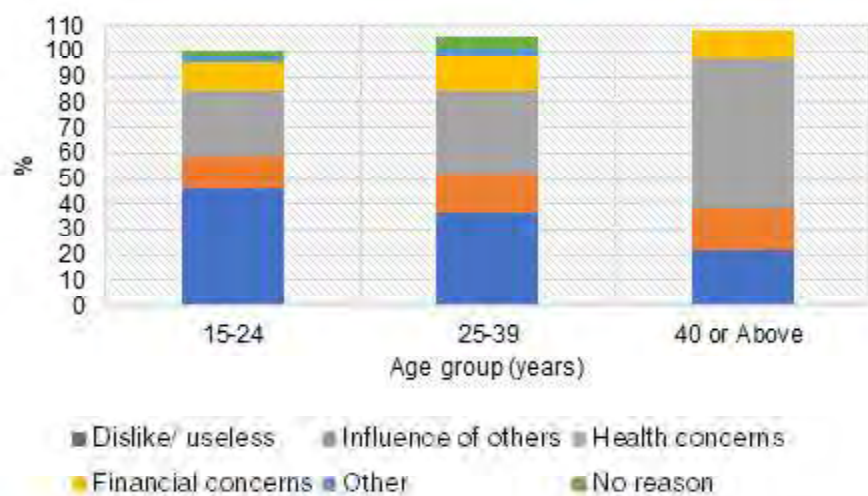
Disliking smoking/considering smoking as useless, the influence of others, health concerns and financial concerns are the four primary reasons to quit from smoking. However, these reasons differ with the age of smokers (Figure 2). It is clear that the percentage of smokers who are quitting smoking due to health concerns increases with age. Emphasising health impacts is likely to be a practical approach in motivating older smokers for quitting. Similarly, the younger groups can be encouraged to quit by stressing on the ineptness of smoking.

Figure 1
Quitting from Tobacco Smoking by Former Smokers Among Ever Smokers - 2018



Source: Alcohol and Drug Information Centre. (2019). *Annual Trend Survey on Tobacco Smoking in Sri Lanka 2018*. Retrieved June 10, 2019 from Alcohol and Drug Information Centre:
<http://adicsrilanka.org/2019/10/17/tobacco-smoking-report-2018/>

Figure 2
Reasons to Quit Smoking - 2018



Source: Alcohol and Drug Information Centre. (2019). *Annual Trend Survey on Tobacco Smoking in Sri Lanka 2018*. Retrieved June 10, 2019 from Alcohol and Drug Information Centre:
<http://adicsrilanka.org/2019/10/17/tobacco-smoking-report-2018/>



6.1 Smoking Cessation Programmes in Sri Lanka

Sri Lanka's current efforts in tobacco cessation are mainly framed in changing the behaviour of people through conducting diversified programmes targetting different groups (Table 2). These include programmes such as; educative sessions, training programmes, awareness programmes through channels of electronic and print media and entertainment programmes (e.g.

short drama competitions, kite festivals).

The main aim of educative sessions and training programmes is to share ways and methods of quitting smoking through developing a 'quit plan' based on the WHO recommendations (WHO, 2014). Examples for electronic and print media include; printed material on adverse impacts of tobacco smoking, testimonials from vendors who stopped selling cigarettes, displaying notices, displaying posters in public places, displaying banners in

“Sri Lanka's current efforts in tobacco cessation are mainly framed in changing the behaviour of people.”

Table 2
Summary of Cessation Programmes in Sri Lanka

Type of Cessation Programme	Aimed Group
Educative Sessions	• School-aged Youngsters • Drug Addicts • Personnel Recruited in Armed Forces • Nursery Kids and School Children • Corporate Sector
Training Programmes (ToT)	• Public Health Inspectors (PHIs) • Public Health Midwives (PHMs) • Medical Officers in Districts • Community Divisional Officers in Divisional Secretariats • Samurdhi Officers • Teachers in National College of Education
Awareness Programmes	• Tobacco Smokers and General Public
Helpline (Free of Charge)	• Tobacco Smokers and General Public
Counselling Programmes	• Tobacco Smokers and their Family
Community-based Cessation Initiatives	• Smoke-free Villages/Zones • Creating Smokeless and Healthy Home Environment for Pregnant Mothers and Children

Source: Compiled by authors based on information gathered from KIIIs.

public places and voice cuts from celebrities. Furthermore, free counselling programmes are carried out by both government and non-government organisations in order to eliminate tobacco smoking from the country. However, it should be noted that these programmes are mostly based in urbanised Colombo and its suburbs. In addition to the aforementioned cessation interventions, Sri Lanka also has a National Helpline introduced by the National Authority on Tobacco and Alcohol

(NATA) which aids smokers to quit smoking through a toll-free quitting helpline.

As discussed above, Sri Lanka has already introduced a wide range of cessation measures, which are positively contributing to bring down smoking prevalence rates. However, at present, these are not sufficiently targetted at the *Last Mile Smokers*, who tend to be harder to reach. Findings of the KIIIs suggest that there exist only few cessation programmes targetted at the *Last Mile*

Smokers and as such, there is still room for improvement in successful cessation interventions.

As noted previously, many existing support programmes such as those on counselling and awareness are centred in Colombo and its suburbs. As such, these programmes are unlikely to be accessible by most of the smokers in rural areas. However, the few prevailing counselling programmes are tailor-made to suit different socio-

demographic cohorts. For instance, in terms of encouraging older male smokers, discussions are based on the financial losses incurred due to smoking, the negative impact on family and children and such techniques are proven to be more successful. As asserted by a key informant interviewee (who is a senior programme officer and a counsellor in one of the Government approved charity organisations in Sri Lanka), counselling programmes for youth give more emphasis on making them realise on the negative impacts that smoking could bring into one's outer appearance and looks. The reason is that youngsters are supposedly more concerned about their appearance. It was also revealed from the KIIs that, in addition to counselling support, it is crucial that the youth receive adequate and continuous family support to quit smoking.

Another key informant interviewee, a PHI, stated that having school level programmes to develop children's life skills will help to avoid initiation of smoking during school days or just after high school and thereafter. However, the country lacks such programmes as more emphasis is given to textbook-based education. In light of the above, smoking initiation should be inculcated in the minds of children while schooling, who grow up to be responsible citizens in future.

A consultant from the NATA highlighted the need to have more

community-based cessation programmes such as 'Smoke-free Villages' in reaching smokers who are out of Colombo and are in rural and estate sectors. Such an approach will enable to increase the smoking quitting rate in the country.

KIIs also emphasise the need for protecting the rural, low income and estate sector smokers who are more vulnerable to industry tactics and get easily manipulated. For instance, as exemplified by the key informant from the Centre for Combatting Tobacco (CCT), the country needs a holistic approach in capturing *Last Mile Smokers*, where the socioeconomic background of the smoker is taken into account and as such, the quitting process is much appropriate.

As set out in the previous chapters, the international evidence suggests that effective cessation support for these groups should have the following characteristics:

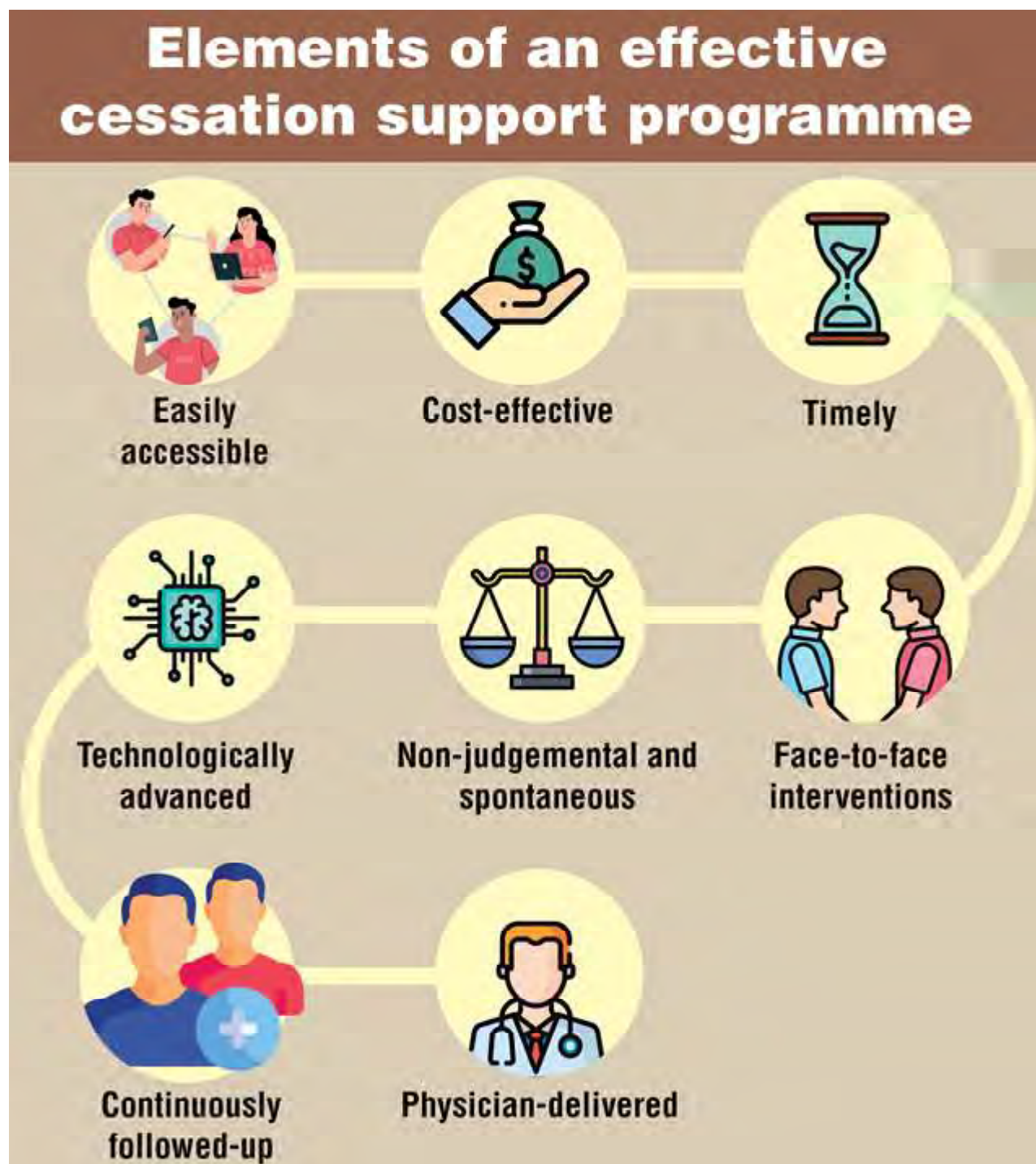
- 1.) Cessation interventions which are easily accessible and cost-effective for instance, community-based cessation support programmes
- 2.) Should be timely and technologically advanced for instance, toll-free quit lines and mobile apps
- 3.) School-level educative programmes and special programmes to develop children's life skills

- 4.) Non-judgmental and spontaneous action
- 5.) Face-to-face interventions
- 6.) Continuous follow-ups on the smokers
- 7.) Physician-delivered interventions
- 8.) Ability to address sensitive areas such as family's well-being through approaches such as 'fathering aspect'.

6.2 'Strategy for Tobacco Cessation in Sri Lanka; 2020-2025'

The 'Strategy for Tobacco Cessation in Sri Lanka 2020-2025' prepared by the NATA and Ministry of Health, Nutrition and Indigenous Medicine aims to implement Article 14 of the FCTC¹⁵ in a manner which suits the Sri Lankan context (Ministry of Health, Nutrition and Indigenous Medicine and World Health Organization Country Office Sri Lanka, 2019). The strategy identifies two complementary approaches for tobacco cessation in Sri Lanka; community tobacco cessation and clinical cessation. The former falls under the approach 'behavioural support' while the latter falls under the 'pharmacological support' approach. Clinical support which focusses primarily to reduce intensity of the urge to smoke and/or adjust the aversive

¹⁵ Article 14 of the WHO FCTC states that "each party shall develop and disseminate appropriate, comprehensive and integrated guidelines based on scientific evidence and best practices, considering national circumstances and priorities and shall take effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence".



symptoms, while community-based programmes focus on boosting or supporting motivation to resist the urge to smoke and develop smokers' capacity to stick to their resolutions which work primarily with individuals, or with groups or communities.

The 'Strategy for Tobacco Cessation in Sri Lanka; 2020-2025' states that, out of these two approaches, community cessation interventions are more cost-effective, as it caters to a large number of people at once and accordingly, a large number of smokers will quit tobacco use

within a short period of time. However, for persons with addiction problems need cessation services in clinical settings. 'Tobacco-free Villages' and 'Creating Smokeless and Healthy Home Environment for Pregnant Mothers and Children' are examples of recent

successful community-based cessation initiatives in Sri Lanka (Box 3).

'Strategy for Tobacco Cessation in Sri Lanka 2020-2025' identifies a hierarchical approach for cessation services appropriate for the integration of clinical and population-based interventions (Figure 3).

The KIIs held with the key stakeholders on smoking cessation and controlling tobacco

revealed that there are many policy gaps (e.g. tobacco taxing, smoking in public places and single stick policy) and implementation gaps (e.g. gaps in the rule of not selling cigarettes to those who are under 21 years) in current smoking cessation and tobacco controlling efforts in the country (Annex 1). Further, the stakeholders who work at the ground level emphasise issues such as lack of resources and lack of interest among senior and high-level officers in controlling

smoking. Industry interferences and influences were also mentioned as an issue for those who work on tobacco controlling at the grass root level. The importance of adopting different strategies in approaching different groups was stressed by most of the stakeholders. The key stakeholders who work on smoking cessation believe that community-based and behavioural approach is more suitable in the Sri Lankan context.

Box 3 Community Cessation Initiatives

'Tobacco-free Zones'

'Tobacco-free Zones' (TFZ) model, is a community-based tobacco smoking cessation intervention currently being implemented in Sri Lanka. This was initially started as a pilot experiment by the involvement of different types of civil society organisations such as women's organisations, welfare societies and business associations in the area, back in 2000. This approach initially involved attracting retail shop owners who were keen to stop the sale of tobacco related products and thereby expanding it further to other areas with the help of village heads, PHI officers, the ADIC and NATA at the grass-root level.

Mahakumbukkadawala, (a rural area situated in the Puttalam District of North Western Province, Sri Lanka) is one of the areas that this programme was implemented in 2016. The PHI of the area describes his experience on the programme;

"A series of discussions, led by a group of community advocates, were conducted with shop owners. The majority showed their willingness to support the intervention and stop selling cigarettes. Vendors formed an action group to act on this, making it a community-led tobacco control programme. After the discussions, the members of the vendors' trade union decided to stop buying tobacco-related products for their shops and clear the already available tobacco products by a particular date. As a result, Mahakumbukkadawala became a tobacco-free area. General public organised events to appreciate the support given by members of the trade union and presented them with certificates of appreciation. It was reported that villagers were able to spend the money saved from not buying cigarettes on their children's education. The intervention received positive media coverage and won a Presidential award of appreciation in 2016".

Currently, similar interventions are ongoing in many areas across the country.

Sources: Sumanasekara, Pubudu. (2020, November 4). *Tobacco Free Zones*. (Interviewed by C. Karunanayake); Tobacco Unmasked. (2020). *Mahakumbukkadawala Cigarette Free Villages*. Retrieved August 10, 2020 from Tobacco Unmasked: http://www.tobaccounmasked.lk/index.php?title=Mahakumbukkadawala_Cigarette_Free_Villages

‘Creating Smokeless and Healthy Home Environment for Pregnant Mothers and Children’

This intervention is mainly focussed on fathers and it stresses on three main areas namely; how smoking negatively affects pregnant mothers’ and unborn children’s health, the household economic impact of smoking, and protecting children from media and industry influences. This intervention is carried out by PHMs who discuss these main three areas with fathers and mothers at the clinics or any other convenient place for them. Fathers and mothers are asked to do simple activities at their homes such as pasting stickers/posters on smoking, calculating costs on smoking and discussing with children. Fathers and mothers are also requested to measure their own progress in reducing smoking. This is an initiation by the ADIC.



Source: Alcohol and Drug Information Centre. (2019a). *PHM - MOH Programme*. Retrieved June 10, 2019 from Alcohol and drug Information Centre: <http://adicsrilanka.org/wp-content/uploads/2019/11/PHM-Manual.pdf>

Figure 3
Hierarchical Approach for Integrated Clinical and Population-based Interventions



Source: Ministry of Health, Nutrition and Indigenous Medicine and World Health Organization Country Office Sri Lanka. (2019, June). *Strategy for Tobacco Cessation in Sri Lanka 2020-2025*.

“In Sri Lanka, quitting is mostly done by self-control. And we as ADIC don’t want to change this situation. We feel that, if we make the quitting a formal process it will become a burden for the smokers and it will also give the wrong message that quitting cannot be done on one’s own and it should be done with medical treatment.”

- Director of Human Development and Administration, ADIC

“We don’t believe in people spending in other addictive substance (nicotine patches, nicotine replacement therapy) - it is a tactic by the tobacco industry.”

- Specialist in Community Medicine & Senior Lecturer in Public Health Faculty of Medicine, University of Kelaniya and Deputy Project Director & Editor, Tobacco Unmasked

7. Conclusion and Policy Implications

Globally, a wide range of smoking cessation interventions are currently in practice which aim to control tobacco smoking prevalence. These smoking cessation interventions can be broadly categorised into two; population or system-level interventions and targeted smoking cessation interventions. While population-level interventions include price

controls, non-price controls, and preventive/awareness-raising interventions, targeted smoking cessation interventions include pharmacological interventions and behavioural interventions. However, these different approaches in tobacco smoking cessation should be used in different settings - and in combination with one another. Some cessation approaches are

suitable only for specified contexts (e.g. price bans and advertising bans are ideal for those who are trying to quit smoking but for more intensive smokers, methods such as a behavioural or pharmacotherapy approaches are more appropriate). Table 3 summarises various interventions recommended for different target groups.

Table 3
Targetted Cessation Interventions- Evidence from Literature Review

Author, Year	Country/Region	Targetted Group	Proposed Intervention
U.S. Department of Health and Human Services, 2020	The U.S.A.	Low-income populations and populations with behavioural health conditions	Behavioural treatment approaches such as individual, group, and telephone counselling through several platforms
National Institute on Drug Abuse, 2020	Low-income and middle-income countries	Youth and individuals in the lower-income cohort	School or community level, restrictions on advertising and mandatory health warnings on packages and price bans through higher taxation
Tucker, et al., 2020	The U.S.A.	Youth and adolescents	Individual counselling, psychological support combined with school-based cessation programmes, cessation intervention through text messages and social media (smoke-free texting and smoke-free social-media)
Larsen, 2020	Denmark	Teenagers	Dialogues on smoking cessation on social media with the support of influencers
Chun, 2019	Korea	Adolescents	Counselling
Rosen & Sockrider, 2019		Adolescents	Discussions that motivate and encourage smokers to quit smoking while addressing their barriers to quit

Author, Year	Country/Region	Targetted Group	Proposed Intervention
Thomas, Bendtsen, Linderoth, & Müssener , 2018	Sweden	High-school students	Mobile health interventions such as text messages
Ham, et al., 2011		Workers in construction and fishery industries	Combative promotion of smoking cessation programmes and workplace rules prohibiting smoking
American Family Physician, 2016	The U.S.A.	Non-pregnant women aged 18 years and above	In-person behavioural support, telephone counselling and self-help materials
World Health Organization, 2005	South-East Asian Region	Students in educational institutes, workers in offices and those who are in sporting environments	Community-based cessation programmes
Tobacco-free Kerala, 2018	India	Rural community	Smoke-free villages
Chatterjee, Patil, Kadam, & Fernandes, 2017	India	Rural community	Tobacco-free village programmes led by villages leaders, religious leaders with the support of the community
Haskins, 2017		Low-income people	Reducing the density of tobacco retailers and introducing free quit lines which connect smokers to free quit coaching. Besides, educative sessions on the existence and accessibility of cessation programmes
Yi-Hsien, et al., 2020	Taiwan	Inpatients	Pay-for-performance subsidy to improve the quality of cessation services in hospitals and smoke-free hospitals
Chen & Wu, 2015	The U.S.A.	Older males who are 50 years and above	Face-to-face interventions, continuous follow-ups on the smokers, physician-delivered interventions and behavioural interventions
Bottorff, et al., 2017	Canada	New and expectant fathers	Sessions that make smokers realise the loss they cause to family finances through interactive smoke-free calculators
Padmawati, Prabandari, Istiyani, Nichter & Nichter, 2018	Indonesia	Fathers	Smoke-free home programmes
Daoud, et al., 2018	Arab	Minority male smokers	Culturally appropriate community-based national plans

Source: Compiled by the authors.

In the context of Sri Lanka, while country's efforts in tobacco control through introducing a various range of smoking cessation interventions is praiseworthy, it is essential that these interventions are tailor-made and are targetted at the *Last Mile Smokers*. According to a study conducted by the Institute of Policy Studies of Sri Lanka, the *Last Mile Smokers* include males in the 40+ age category; non-schooling males aged 15-24 and males from specific occupation categories - drivers, construction workers (Madurawala, Karunanayake, & Thilanka, 2020). Furthermore, in most cases, the *Last Mile Smokers* are from the informal sector and there is no proper mechanism or network to capture them. As such, if Sri Lanka is to reach the end game in lowering the smoking prevalence, all agencies and institutes that are working towards smoking cessation in the country should design tailor-made programmes for each of these 'HRG' (e.g. reaching the construction workers during night times, having sessions for drivers at their parking areas, getting support from other existing networks and linkages - such as reaching agricultural sector workers through extension offices).

7.1 Smoking Cessation Support for the Last Mile Smokers

Penetrating the 'HRG' is essential and should be considered as a priority area to bring down the smoking prevalence among the *Last Mile of smokers* in Sri

“Sri Lanka's efforts in tobacco control through introducing various range of cessation interventions is praiseworthy, it is essential that these interventions are tailor-made and are targetted at the *Last Mile Smokers*.”

Lanka. In this context, as recommended by the U.S. Department of Health and Human Services (2020), in terms of helping the low-income people to quit smoking, the country can further broaden the behavioural treatment approaches such as individual and group counselling to reach a wider audience and strengthen telephone counselling through several platforms. Furthermore, as suggested by Tucker, et al. (2020) and Larsen (2020), to assist the youth and the adolescents to quit smoking, the country can introduce more individual counselling programmes, cessation programmes that combine psychological support, cessation

interventions through toll-free text messages and social media with the assistance of popular social media influencers (smoke-free social-media). In terms of reaching the construction sector workers, as recommended by Ham, et al. (2011), Sri Lanka can follow the aggressive promotion of smoking cessation programmes and workplace rules prohibiting smoking. Furthermore, as exemplified by Chatterjee, Patil, Kadam, & Fernandes (2017), Sri Lanka can further broaden current 'Tobacco-free Zones' programmes with the assistance of religious and community leaders as a successful cessation approach among the rural community. In addition, as confirmed by Haskins (2017), reducing the density of tobacco retailers and introducing toll-free quit lines which connect smokers to provide free quit coaching is another effective community-level approach that can assist those in rural areas to quit smoking.

Similarly, findings of KIIs with the stakeholders confirm evidence from literature on feasibility and effectiveness of community-based smoking cessation in the Sri Lankan context. As such, agencies that are working towards/on smoking cessation in Sri Lanka should focus more on community-based behavioural smoking cessation interventions, going forward. Encouragingly, the proposed 'Strategy for Tobacco Cessation in Sri Lanka 2020-2025' is already promoting community cessation to reach the current smokers, and it should further broaden the programmes to reach the *Last Mile Smokers* across Sri Lanka. Furthermore, these

community cessation interventions should be combined with an educational component in par with international best practices (i.e. education on withdrawal symptoms, identification of triggers, stress management and relaxation strategies).

While broadening targetted cessation interventions in Sri Lanka is essential to increase the quitting rates among the *Last Mile Smokers*, it is also important to learn if latter have any interest in quitting and provide tailored advice on services and treatments available in a non-judgmental manner. Fear of being judged, lack of knowledge, inflexibility and lack of accessibility to cessation services are some critical barriers in this regard. Promoting and allowing flexibility, accessibility, spontaneous actions and high visibility, and broader outreach are essential elements of cessation programmes targetting the 'HRG'. These programmes should build on the success of existing initiatives, including 'Tobacco-free Areas' programme and the 'Creating Smokeless and Healthy Home Environment for Pregnant Mothers and Children' programme.

At this point, it is also important to note that a majority of research studies conducted on smoking cessation are dominated by the pharmaceutical industry. As such, it can be suggested that in future, more research studies in behavioural aspects and other dimensions are conducted in order to lower the biasedness related to pharmacological treatments.

The study findings are translated to the following recommendations:

1. Giving priority to HRG (i.e. the *Last Mile Smokers*) and their socio-demographic backgrounds when preparing the national framework for cessation support so that, cessation programmes can be tailor-made to best suit the *Last Mile Smokers*.
2. Sri Lanka needs to pay more focus on introducing and implementing targetted behavioural cessation interventions, especially the community-based interventions. This is mainly because of suitability of such interventions in the local context and its cost-effectiveness. Further, such an approach would enable reaching the *Last Mile Smokers* in the country.
3. Implementation of the 'Strategy for Tobacco Cessation in Sri Lanka 2020-2025' - the national strategy document has identified the most appropriate type of tobacco cessation intervention for the local setting (i.e. community cessation). Further, it has also clearly mentioned the activities and examples that come under community cessation. In this context, it is crucial to ensure proper implementation of the Strategy by explicitly identifying the implementing mechanisms, monitoring and evaluation responsibilities and, sources and tools of funding.
4. Widening/expanding prevailing community-based cessation interventions such as 'Tobacco-free Zones' which are identified to be beneficial in reaching a wider audience relatively at a lower cost and a less period of time is pivotal to progress.
5. Continuous follow-ups on smokers even after they quit, in order to ensure they do not re-start to smoke.

“Sri Lanka needs to pay more focus on introducing and implementing targetted behavioural cessation interventions, especially the community-based interventions.”

Finally, but most importantly, it is essential to note that, different tobacco smoking cessation interventions alone won't reduce the prevalence rates; and as such it is recommended that cessation interventions be combined with a suite of below-mentioned policies going forward:

- Implementation of the single stick ban.
- Further increasing the prices through inflation-adjusted taxation.
- Taking action against those who violate tobacco control

“Different tobacco smoking cessation interventions alone won't reduce the prevalence rates, they should be combined with other policies in going forward.”

laws such as involving in tobacco sponsorships, informal and indirect promotions such as displaying of 'Abhisheka' certificates in shops and social media campaigns that promote tobacco use among social media users.

- Further strengthening and addressing the gaps in smoke-free policies.

References

- Alcohol and Drug Information Centre. (2019).** *Annual Trend Survey on Tobacco Smoking in Sri Lanka 2018*. Retrieved November 10, 2019, from Alcohol and Drug Information Centre: <http://adicsrilanka.org/2019/10/17/tobacco-smoking-report-2018/>
- Alcohol and Drug Information Centre. (2019a).** *PHM - MOH Programme*. Retrieved November 20, 2019, from Alcohol and Drug Information Centre: <http://adicsrilanka.org/wp-content/uploads/2019/11/PHM-Manual.pdf>
- American Family Physician. (2016, May 15).** Behavioural and Pharmacotherapy Interventions for Tobacco Smoking Cessation in Adults, Including Pregnant Women: Recommendation Statement. *American Family Physician*, 93(10).
- American Public Health Association. (2017, October).** *Smoking Rates Still High Among Low-income Americans: Disparities Ongoing*. Retrieved May 05, 2020, from The Nation's Health, American Public Health Association <http://thenationshealth.aphapublications.org/content/47/8/1.2>
- Aveyard, P., & Raw, M. (2012).** Improving Smoking Cessation Approaches at the Individual Level. *Tobacco Control*, 252-257. doi:<http://dx.doi.org/10.1136/tobaccocontrol-2011-050348>
- Avineri, E. (2012).** On the Use and Potential of Behavioural Economics from the Perspective of Transport and Climate Change. *Journal of Transport Geography*, 24, 512-521.
- Barberis, N. (2018).** Richard Thaler and the Rise of Behavioural Economics. In R. Friberg, M. Liski, & K. Storeslett (Eds.), *Scandinavian Journal of Economics*, 120(3), 661-684.
- Bickerstaffe, G. (2014).** Smoking Cessation for Hospital Inpatients. *British Medical Journal*. Retrieved August 19, 2020, from <https://bmjopenquality.bmj.com/content/3/1/u204964.w2110>
- Bottorff, J., Oliffe, J., Sarbit, G., Caperchione, C., Clark, M., Anand, A., & Howay, K. (2017, January 11).** Assessing the Feasibility, Acceptability and Potential Effectiveness of an integrated Approach to Smoking Cessation for New and Expectant Fathers: The Dads in Gear Study Protocol. *Contemporary Clinical Trials*, 54, 77 - 83.
- Caponnetto, P., DiPiazza, J., Cappello, G. C., Demma, S., Maglia, M., & Polosa, R. (2019, October 06).** Multimodal Smoking Cessation in a Real-life Setting: Combining Motivational Interviewing with Official Therapy and Reduced Risk Products. *Tobacco Use Insights*, 12.
- Cassidy, R., & Kurti, A. (2018, June 18).** Behavioural Economic Research in Addiction as an Area of Growth for the Experimental Analysis of Behaviour. *Behavioural Analysis*, 18(4). doi:DOI: 10.1037/bar0000105
- Chapman, S., & MacKenzie, R. (2010, February 09).** The Global Research Neglect of Unassisted Smoking Cessation: Causes and Consequences. *PLoS Med*, 7(2).
- Chatterjee, N., Patil, D., Kadam, R., & Fernandes, G. (2017, September 27).** The Tobacco-free Village Programme: Helping Rural Areas Implement and Achieve Goals of Tobacco Control Policies in India. *Global Health, Science and Practice*, 5(3), 476 - 485.
- Chen, D., & Wu, L.-T. (2015, June 9).** Smoking Cessation Interventions for Adults Aged 50 or Older: A Systematic Review and Meta-analysis. *Drug Alcohol Depend* (154).
- Cherukupalli, R. (2010, April 1).** A Behavioural Economics Perspective on Tobacco Taxation. *American Journal of Public Health*, 100(4), 609 - 615.
- Chun, E. (2019, January).** Smoking Cessation Strategies Targeting Specific Populations. *Tuberculosis and Respiratory Diseases*, 82(1).
- Cohen-Mansfield, J. (2016, January 17).** Predictors of Smoking Cessation in Old-old Age. *Nicotine and Tobacco Research*, 18(7), 1675 - 1679.

- Costa, D. F., de Melo Carvalho, F., & de Melo Moreira, B. C. (2019, February).** Behavioural Economics and Behavioural Finance: A Bibliometric Analysis of the Scientific Fields. *Journal of Economic Surveys*, 3 - 24.
- Costa, M., & Esteves, M. (2018, March).** Cigarette Smoking and Sleep Disturbance. *Addictive Disorders & their Treatment*, 17(1), 40 – 48. doi:10.1097/ADT.0000000000000123
- Daoud, N., Jung, Y. E., Sheikh Muhammad, A., Weinstein, R., Qaadny, A., Ghattas, F., . . . Grotto, I. (2018, October 24).** Facilitators and Barriers to Smoking Cessation Among Minority Men Using the Behavioural-Ecological Model and Behaviour Change Wheel: A Concept Mapping Study. *PLoS ONE*, 13(10).
- Efendi, F., Aidah, F. N., Has, E. M., Lindayani, L., & Reisenhofer, S. (2019, August 14).** Determinants of Smoking Behaviour Among Young Males in Rural Indonesia. *International Journal of Adolescent Medicine and Health*.
- Giannakopoulos, G., Tzavara, C., Dimitrakaki, C., Kolaitis, G., Rotsika, V., & Tountas, Y. (2010, February 03).** Emotional, Behavioural Problems and Cigarette Smoking in Adolescence: Findings of a Greek Cross-sectional Study. *BioMed Central Public Health*, 10.
- Gino, F. (2017, October 10).** *Behavioural Economics and its Influence on Organisations*. Retrieved 1 September, 2019, from Harvard Business Review: <https://hbr.org/2017/10/the-rise-of-behavioral-economics-and-its-influence-on-organizations>
- Goings, T. C., Hidalgo, S. T., & McGovern, P. P. (2017).** Racial/Ethnic Differences in Cigarette Use Trends in the United States among Multiracial and Other Youth, 1994-2008. *Journal of Drug Issues*, 48(1), 90 - 105. doi:<https://doi.org/10.1177/0022042617731338>
- Graham, A., & Amato, M. S. (2019).** Twelve Million Smokers Look Online for Smoking Cessation Help Annually: Heath Information National Trends Survey Data, 2005-2017. *Nicotine and Tobacco Research*, 21(2), 249-252. doi:<https://doi.org/10.1093/ntr/nty043>
- Guindon, G., Paraje, G., & Chaloupka, F. (2015, March).** The Impact of Prices and Taxes on the Use of Tobacco Products in Latin America and the Caribbean. *American Journal of Public Health*, 105(3). Retrieved August 19, 2020, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4330839/>
- Ham, D., Przybeck, T., Strickland, J., Luke, D., Bierut, L., & Evanoff, B. (2011, November).** Occupation and Workplace Policies Predict Smoking Behaviours: Analysis of National Data from the Current Population Survey. *Journal of Occupational and Environmental Medicine*, 53(11), 1337 – 1345.
- Hampson, S., Andrews, J., Barckley, M., Lichtenstein, E., & Lee, M. (2000).** Conscientiousness, Perceived Risk, and Risk Reduction Behaviours: A Preliminary Study. *Health Psychology*, 19(5), 496-500.
- Harvey, J., & Chadi, N. (2016, May).** Strategies to Promote Smoking Cessation Among Adolescents. *Paediatrics and Child Health*, 21(4), 201-204.
- Haskins, J. (2017).** *Smoking Rates Still High Among Low Income Americans: Disparities Ongoing*. The Nation's Health, American Public Health Association.
- Jordan, H., Hidajat, M., Payne, N., Jean, A., White, M., & Ben-Shlomo, Y. (2017, November 15).** What are Older Smokers' Attitudes to Quitting and How are They Managed in Primary Care? An Analysis of the Cross-sectional English Smoking Toolkit Study. *BMJ Open*, 7(11).
- Kopsaftis, Z., Agterén, J., Carson, K., O'Loughlin, T., & Smith, B. (2017).** Smoking Cessation in the Hospital Setting: A Systematic Review and Meta-analysis. *The European Respiratory Journal*, 50(61). doi:DOI: 10.1183/1393003.congress-2017.PA1271
- Kuipers, M., West, R., & Beard, E. (2019, June 27).** Impact of the “Stoptober” Smoking Cessation Campaign in England From 2012 to 2017: A Quasi Experimental Repeat Cross-sectional Study. *Nicotine & Tobacco Research*. doi:<https://doi.org/10.1093/ntr/ntz108>

- Lai, D. T., Cahill, K., Qin, Y., & Tang, J.-L. (2010, January 20).** *Motivational Interviewing for Smoking Cessation*. doi:<https://doi.org/10.1002/14651858.CD006936.pub2>
- Larsen, N. (2020).** But Why Smoke? – Smoking Prevention Using Social Media and Influencers. *8th European Conference on Tobacco or Health*, (p. 76). Retrieved July 23, 2020, from European Conference on Tobacco and Health: https://www.ectoh.org/files/content/Program/ECToH-2020_Abstract-Book_final_1.pdf
- Levy, D., Tam, J., Kuo, C., Fong, G., & Chaloupka, F. (2018, September).** The Impact of Implementing Tobacco Control Policies: The 2017 Tobacco Control Policy Scorecard. *Journal of Public Health Management and Practice*, 24(5), 448–457.
- Liljas, A., Walters, K., Jovicic, A., Iliffe, S., Manthorpe, J., Goodman, C., & Kharicha, K. (2019).** Engaging ‘Hard To Reach’ Groups in Health Promotion: The Views of Older People and Professionals from Qualitative Study in England. *BMC Public Health*, 16(629). doi:<https://doi.org/10.1186/s12889-019-6911-1>
- Lunze, K., & Paasche-Orlow, M. (2013).** Financial Incentives for Healthy Behaviour: Ethical Safeguards for Behavioural Economics. *American Journal of Medicine*, 44(6), 659–665.
- Madurawala, S., & Karunanayake, C. (2020, February 2020).** *Policy Insight on Smoking Cessation Policies in Sri Lanka*. Retrieved April 11, 2020, from Institute of Policy Studies of Sri Lanka: http://www.ips.lk/wp-content/uploads/2020/02/Smoking-Cessation_final.pdf
- Madurawala, S., Karunanayake, C., & Thilanka, C. (2020).** *Tobacco Smoking in Sri Lanka: Understanding the Last Mile Smokers in Sri Lanka*. Colombo: Institute of Policy Studies of Sri Lanka.
- Marti, J., & Sindelar, J. (2015, September 10).** Smaller Cigarette Pack as a Commitment to Smoke Less? Insights from Behavioral Economics. *Public Library of Science*.
- Matthews, A., Sánchez-Johnsen, L., & King, A. (2009, December).** Development of a Culturally Targeted Smoking Cessation Intervention for African American Smokers. *Journal of Community Health*, 34(6), 480 - 492.
- Michie, S., & Williams, S. (2003).** Reducing Work Related Psychological Ill Health and Sickness Absence: A Systematic Literature Review. *Occupational and Environmental Medicine*, 60(1).
- Michie, S., Churchill, S., & West, R. (2011).** Identifying Evidence-based Competences Required to Deliver Behavioural Support for Smoking Cessation. *Annals of Behavioural Medicine*, 41, 59 - 70.
- Ministry of Health, Nutrition and Indigenous Medicine and World Health Organization Country Office Sri Lanka. (2019, June).** *Strategy for Tobacco Cessation in Sri Lanka 2020-2025*.
- Murray, R. L., Bauld, L., Hackshaw, L. E., & McNeill, A. (2009).** Improving Access to Smoking Cessation Services for Disadvantaged Groups: A Systemic Review. *Journal of Public Health*, 312, 258-277. doi:<https://doi.org/10.1093/pubmed/fdp008>
- Murthy, P., & Saddichha, S. (2010, July 9).** Tobacco Cessation Services in India: Recent Developments and the Need for Expansion. *Community Research*, 47(5), 69-74. Retrieved December 20, 2019, from <http://www.indianjcancer.com/article.asp?issn=0019-509X;year=2010;volume=47;issue=5;spage=69;epage=74;aulast=Murthy>
- Nagelhout, G., Zhuang, Y.-L., Gamst, A., & Zhu, S.-H. (2015, May).** Do Smokers Support Smoke-free Laws to Help Themselves Quit Smoking? Findings from a Longitudinal Study. *Tobacco Control*, 24(3), 233–237. Retrieved August 20, 2020, from Tobacco Control <https://tobaccocontrol.bmj.com/content/24/3/233>
- National Cancer Institute in collaboration with World Health Organization. (2017, May 3).** Chapter 4: The Impact of Tax and Price on the Demand for Tobacco Products. In *Monograph 21: The Economics of Tobacco and Tobacco Control* (pp. 109 - 162). U.S. Department of Health & Human Services, National Institute of Health. Retrieved August 19, 2020, from National Cancer Institute <https://cancercontrol.cancer.gov/brp/tcrb/monographs/21/index.html>

- National Institute on Drug Abuse. (2020).** *Tobacco, Nicotine, and E-cigarettes Research Report*. Retrieved July 23, 2020, from National Institute on Drug Abuse <https://www.drugabuse.gov/publications/research-reports/tobacco-nicotine-e-cigarettes/how-can-we-prevent-tobacco-use>
- Oduor, M., & Oinas-Kukkonen, H. (2017).** Behavioural Economics in Information Systems Research: A Persuasion Context Analysis. *19th International Conference on Enterprise Information Systems (ICEIS 2017)*. 3, pp. 17-28. SCITEPRESS – Science and Technology Publications, Lda. doi:10.5220/0006277700170028
- Padmawati, R., Prabandari, Y., Istiyani, T., Nichter, M., & Nichter, M. (2018, November).** Establishing a Community-based Smoke-free Homes Movement in Indonesia. *Tobacco Prevention and Cessation*, 4. doi:<https://doi.org/10.18332/tpc/99506>
- Park, E. (2019, November 27).** *Behavioural Approaches to Smoking Cessation*. (M. Aronson, & J. Stoller, Eds.) Retrieved January 1, 2020, from UpToDate: https://www.uptodate.com/contents/behavioral-approaches-to-smoking-cessation?source=related_link
- Pasquale, C., DiPiazza, J., Cappello, G. C., Demma, S., & Maglia, M. (2019, October 06).** Multimodal Smoking Cessation in a Real-life Setting: Combining Motivational Interviewing with Official Therapy and Reduced Risk Products. *Tobacco Use Insights*. doi:<https://doi.org/10.1177/1179173X19878435>
- Passey, M., & Bonevski, B. (2014).** The Importance of Tobacco Research Focusing on Marginalised Groups. *Addiction*, 109, 1049-1051. Retrieved July 10, 2019, from <https://onlinelibrary.wiley.com/doi/pdf/10.1111/add.12548>
- Prince, M., Carey, K., & Maisto, S. (2013).** Protective Behavioural Strategies for Reducing Alcohol: A Review of the Methodological Issues. *Addictive Behaviours*, 38(7), 2343–2351.
- Psychology Today. (2017, May 03).** *Behavioural Economics*. Retrieved September 1, 2019, from Psychology Today: <https://www.psychologytoday.com/us/basics/behavioral-economics>
- Roberts, N., Kerr, S., & Smith, S. M. (2013, August 11).** Behavioural Interventions Associated with Smoking Cessation in the Treatment of Tobacco Use. *Health Services Insights*, 79–85.
- Rondina, R., Gorayeb, R., & Botelho, C. (2007, March 28).** Psychological Characteristics Associated with Tobacco Smoking Behaviour. *Jornal Brasileiro de Pneumologia*, 3(5), 592-601.
- Rosen, J., & Sockrider, M. (2019, December 12).** *Management of Smoking and Vaping Cessation in Adolescents*. Retrieved December 15, 2019 from UpToDate: <https://www.uptodate.com/contents/management-of-smoking-and-vaping-cessation-in-adolescents>
- Schar, E., & Gutierrez, K. (2001).** *Smoking Cessation Media Campaigns from Around the World: Recommendations from Lessons Learned*. World Health Organization Regional Office for Europe.
- Selden, G. (2019, June 26).** *Introduction to Behavioural Economics*. Retrieved August 30, 2019, from Intelligent Economist: <https://www.intelligenteconomist.com/introduction-to-behavioral-economics/>
- Siva, I. (2010).** Using the Lessons of Behavioural Economics to Design More Effective Pay-for-performance Programmes. *The American Journal of Managed Care*, 16(7), 497–503.
- Slomski, A. (2019, February 26).** Cessation Intervention for Low-Income Smokers. *JAMA*, 321(8).
- Snyder, H. (2019).** Literature Review as a Research Methodology: An Overview and Guidelines. *Journal of Business Research*, 104, 333-339. doi:<https://doi.org/10.1016/j.jbusres.2019.07.039>
- Soulakova, J., & Crockett, L. (2018).** Unassisted Quitting and Smoking Cessation Methods Used in the United States: Analyses of 2010–2011 Tobacco Use Supplement to the Current Population Survey Data. *Nicotine and Tobacco Research*, 20(1), 30–39.
- Sreeramareddy, C. T., Pradhan, P. M., Mir, I. A., & Sin, S. (2014, August 28).** Smoking and Smokeless Tobacco Use in Nine South and Southeast Asian Countries: Prevalence Estimates and Social

- Determinants from Demographic and Health Surveys. *Population Health Metrics*, 12(22). doi:10.1186/s12963-014-0022-0
- Stead, L., Carroll, A., & Lancaster, T. (2017).** Group Behaviour Therapy Programmes for Smoking Cessation. *Cochrane Database of Systematic Reviews 2017*, Article No: CD0010(3), 4 - 91. doi:<https://doi.org/10.1002/14651858.CD001007.pub3>
- Sudarmin, R., Zulki, A., Masni, Suriah, Habibi, Maharja, R., & Syamsul, M. A. (2019, January).** Smoking Behaviour on Fisheries in Kodingareng Island District Sangkarrang Island. *Indian Journal of Public Health Research and Development*.
- Sumanasekara, Pubudu. (2020, November 4).** *Tobacco Free Zones*. (C. Karunanayake, Interviewer)
- Tapera, R., Mbongwe, B., Mhaka-Mutepfa, M., Lord, A., Phaladze, N., & Zetola, N. (2020, June 5).** The Theory of Planned Behaviour as a Behaviour Change Model for Tobacco Control Strategies Among Adolescents in Botswana. *PLoS ONE*, 15(6). doi:<https://doi.org/10.1371/journal.pone.0233462>
- Thomas, K., Bendtsen, M., Linderoth, C., & Müssener, U. (2018, November 22).** mHealth Smoking Cessation Intervention Among High-School Pupils (NEXit Junior): Study Protocol for a Randomised Controlled Trial. *Trials*.
- Tidey, J., Cassidy, R., Miller, M., & Smith, T. (2016, October).** Behavioural Economic Laboratory Research in Tobacco Regulatory Science. *Tobacco Regulatory Science*, 2(4), 440 - 451. Retrieved August 19, 2020, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5453650/pdf/nihms853648.pdf>
- Tobacco Free Kerala. (2018, January 4).** *Yikhum Village Becomes 1st Tobacco Free Village in Nagaland*. Retrieved January 02, 2020, from <https://tobaccofreekerala.blogspot.com/2018/01/yikhum-village-becomes-1st-tobacco-free.html>
- Tobacco Unmasked. (2020).** *Mahakumbukkadawala Cigarette Free Villages*. Retrieved August 10, 2020 from Tobacco Unmasked: http://www.tobaccounmasked.lk/index.php?title=Mahakumbukkadawala_Cigarette_Free_Villages
- Troelstra, S., Harting, J., & Kunst, A. (2019, February).** Effectiveness of a Large, Nation-Wide Smoking Abstinence Campaign in the Netherlands: A Longitudinal Study. *International Journal of Environmental Research and Public Health*, 16(3). Retrieved August 19, 2020, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6388192/>
- Truth Initiative. (2019).** *Spinning a New Tobacco Industry*. Retrieved August 20, 2020, from https://truthinitiative.org/sites/default/files/media/files/2019/11/Tobacco%20Industry%20Interference%20Report_final111919.pdf
- Tucker, J., Pedersen, E., Linnemayr, S., Shadel, W., DeYoreo, M., & Zutshi, R. (2020, February 19).** A Text Message Intervention for Quitting Cigarette Smoking Among Young Adults Experiencing Homelessness: Study Protocol for a Pilot Randomised Controlled Trial. *Addiction Science & Clinical Practice*, 15(11). doi:<https://doi.org/10.1186/s13722-020-00187-6>
- Twyman, L., Bonevski, B., Paul, C., & Bryant, J. (2014).** Perceived Barriers to Smoking Cessation in Selected Vulnerable Groups: A Systemic Review of the Qualitative and Quantitative Literature. *BMJ Open*, 4(12). doi:10.1136/bmjopen-2014-006414
- U.S. Department of Health and Human Services. (2014).** *The Health Consequences of Smoking—50 Years of Progress*. Washington D.C.: U.S. Department of Health and Human Services.
- U.S. Department of Health and Human Services. (2020).** Interventions for Smoking Cessation and Treatments for Nicotine Dependence. In *Smoking Cessation: A Report of the Surgeon General* (p. 700). Retrieved August 18, 2020, from U.S. Department of Health and Human Services: https://www.ncbi.nlm.nih.gov/books/NBK555591/pdf/Bookshelf_NBK555591.pdf

- U.S. Department of Health and Human Services. (2020).** *Smoking Cessation: A Report of the Surgeon General*. Rockville. Retrieved July 23, 2020, from U.S. Department of Health and Human Services <https://www.hhs.gov/sites/default/files/2020-cessation-sgr-full-report.pdf>
- Venn, A., Dickinson, A., Murray, R., Jones, L., Li, J., Parrott, S., & McNeill, A. (2016).** Effectiveness of a Mobile, Drop-in Stop Smoking Service in Reaching and Supporting Disadvantaged UK Smokers to Quit. *Tobacco Control*, 25, 33-38. doi:<http://dx.doi.org/10.1136/tobaccocontrol-2014-051760>
- West, R., McNeill, A., & Raw, M. (2000).** Smoking Cessation Guidelines for Health Professionals: An Update. *Thorax*, 55(12), 987-999. doi:10.1136/thorax.55.12.987
- Wijk, E., Landais, L., & Harting, J. (2019, March 20).** Understanding the Multitude of Barriers that Prevent Smokers in Lower Socioeconomic Groups From Accessing Smoking Cessation Support: A Literature Review. *Preventive Medicine*, 123, 143 - 151.
- Wilson, L. M., Avila Tang, E. C., Hutton, H. E., Odelola, O., Elf, J. L., Heckman-Stoddard, B., . . . Apelberg, B. J. (2012).** Impact of Tobacco Control Interventions on Smoking Initiation, Cessation, and Prevalence: A Systemic Review. *Journal of Environmental and Public Health*, 961724. doi:10.1155/2012/961724
- Wong, G., Greenhalgh, T., Westhorp, G., Buckingham, J., & Pawson, R. (2013).** RAMESES Publication Standards: Meta-narrative Reviews. *BMC Medicine*, 11(20). doi:<https://doi.org/10.1186/1741-7015-11-20>
- World Health Organization. (2005).** *Regional Strategy for Tobacco Control*. New Delhi: Regional Office for South - East Asia. Retrieved December 30, 2019, from http://apps.searo.who.int/PDS_DOCS/B0273.pdf
- World Health Organization. (2014).** *A Guide for Tobacco Users to Quit*. Retrieved October 20, 2019, from World Health Organization: https://apps.who.int/iris/bitstream/handle/10665/112833/9789241506939_eng.pdf?sequence=1
- World Health Organization. (2014a).** *Toolkit for Delivering the 5A's and 5R's Brief Tobacco Interventions in Primary Care*. Retrieved August 20, 2020, from World Health Organization: https://apps.who.int/iris/bitstream/handle/10665/112835/9789241506953_eng.pdf;jsessionid=19AF164E2AFFC62A9AED44FCCDBCDF08?sequence=1
- World Health Organization. (2018).** *Fact Sheet 2018 Sri Lanka*. Retrieved August 20, 2019, from World Health Organization Regional Office for South East Asia: https://apps.who.int/iris/bitstream/handle/10665/272688/wntd_2018_srilanka_fs.pdf?sequence=1
- World Health Organization. (2019).** *Tobacco Free Initiative (TFI) Offer Help to Quit Tobacco Use*. Retrieved November 15, 2019, from World Health Organization: <https://www.who.int/tobacco/mpower/offer/en/index1.html>
- World Health Organization. (2019a).** *Tobacco Free Initiative (TFI) - Quitting Tobacco*. Retrieved July 15, 2019, from World Health Organization: https://www.who.int/tobacco/quitting/summary_data/en/
- World Health Organization. (2019b).** *WHO Report on the Global Tobacco Epidemic, 2019*. Geneva: World Health Organization.
- World Health Organization. (2020).** *Tobacco: Key Facts*. Retrieved August 19, 2020, from World Health Organization <https://www.who.int/news-room/fact-sheets/detail/tobacco>
- Zuckerman, M., & Kuhlman, D. (2000).** Personality and Risk-taking: Common Biosocial Factors. *J Pers*, 68(6), 999-1029.
- Zwar, N., Mendelsohn, C., & Richmon, R. (2014, June).** Tobacco Smoking: Options for Helping Smokers to Quit. *Australian Family Physician*, 43(6), 348 - 354.

Annex

Annex 1 Behavioural Economics

Behavioural economics is relatively a new school of thought of which the existence was realised in the 20th century and popularly coined by Richard Thaler, who is considered to be the founder or the father of behavioural economics (Barberis, 2018). According to Selden (2019), it is a branch of economics that focusses to measure the reasoning behind the unexpected nature of human behaviour in contrary to the conventional economic theory, where it is believed that people behave rationally. He further states that, behavioural economists attempt to use what he refers as, 'predictable rationality'¹⁶ to model outcomes that would not be predicted by traditional or conventional economics but that can be better predicted by understanding certain behaviours. As exemplified by Psychology

Today (2017), behavioural economics links insights of psychology to economics, to explicate decision making with a special focus on the outcomes that might be considered to be irrational in some frameworks. In that respect, it should be noted that, even though the essence of traditional/conventional economics lies upon the rational man who is expected to behave and take decisions logically after weighing the costs and benefits and choosing the best possible choice, in behavioural economics the case is quite different. As such, it demonstrates that people very rarely behave in the aforementioned manner. It is thus, evident that in the field of behavioural economics, people are not seen as creatures that are always self-interested, rational, having consistent preferences,

logical in maximising benefits and minimising costs.

According to Thorgeirsson & Kawachi (2013), as cited in Oduor & Oinas-Kukkonen (2017, p. 19), behavioural economics departs the commonly accepted economic model in agreeing upon three specific behavioural traits namely; bounded rationality (as a result of the limited information processing capabilities of humans, they adopt rules of thumb to aid in solving problems and in taking decisions), secondly, bounded will power (implies that, owing to lack of self-control, people do not always behave as rational beings and thus, do not always select options that are in their best interests in the long run) and finally, bounded selfishness (the act of people being altruistic and spiteful in their behaviours leaving behind self-interests).

¹⁶ 'Predictable Rationality' implies that that people behave irrationally, but they do so in a consistent and foreseeable nature.

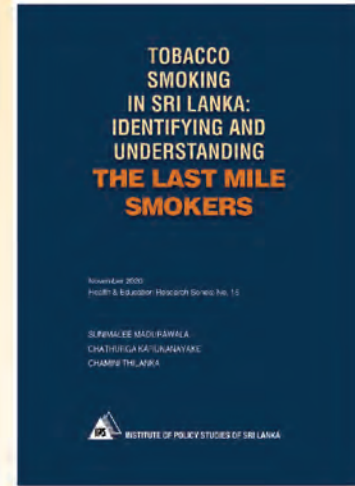
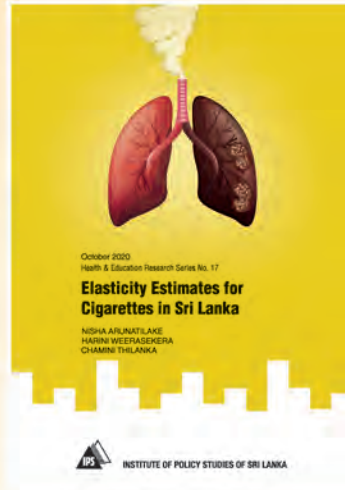
Annex 2

List of Key Informant Interviews

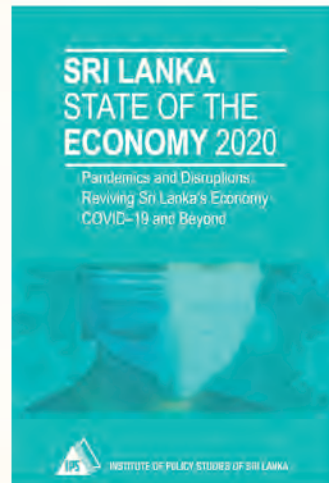
	Name of the Interviewee	Organisation	Designation and Expertise
1	Mr. Prasad Gunawardene	Sumithrayo (Government approved charity organisation)	Senior Programme Officer - Psychology/Psychotherapy/ Counselling
2	Mr. Sampath De Seram	ADIC	Director Human Development and Administration- Experienced in the Field
3	Dr. Manuja Perera	Faculty of Medicine - University of Kelaniya & Centre for Combatting Tobacco (CCT) ¹⁷	Senior Lecturer in Public Health, Academician and Specialist in Community Medicine- CCT experience
4	Dr. Sajeewa Ranaweera	National Authority on Tobacco and Alcohol (NATA)	Consultant to NATA, WHO, Member of Committee on Tobacco and Alcohol & Sri Lanka Medical Association (SLMA)- Experience in the Field / Consultant NATA
5	Ms. Sachintha Fernando	Verite Research	Team Leader Economic Research at Verite - Research in Tobacco Control in Sri Lanka
6	Name cannot be disclosed owing to confidentiality	Public Health Inspector - Ministry of Health Sri Lanka	Public Health Inspector - Experience in the Field

¹⁷ CCT is the Sri Lankan tobacco observatory established at the Faculty of Medicine University of Colombo under the Article 5.3 of the Framework Convention on Tobacco Control (FCTC). The aim of the CCT is to monitor the tobacco industry activities related to implementation of Article 5.3 in Sri Lanka and the region.

MORE IN THIS SERIES



LATEST PUBLICATION



Institute of Policy Studies of Sri Lanka

100/20, Independence Avenue, Colombo 7, Sri Lanka

Tel: +94 11 2143100 Fax: +94 11 2665065

Email: ips@ips.lk; Website: www.ips.lk

Blog 'Talking Economics': www.ips.lk/talkingeconomics

Twitter: [www.twitter.com/TalkEconomicsSL](https://twitter.com/TalkEconomicsSL)

Facebook: www.facebook.lk/instituteofpolicystudies

ISBN is 978-955-7397-24-5