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Research Article

Re-Examining Healthy Lifestyle among Young People: Implementing the Strategic Action Plan to Reduce Smoking and Control Smoking Related Non-Communicable Diseases

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Abstract

Background: Some young people develop smoking habit which is classified as a risk factor for non-communicable diseases by World Health Organization (WHO) and pose a danger to their health. This study aimed to develop a strategic action plan that can be implemented to reduce smoking and control smoking related non-communicable disease.

Methods: The study adopted a mixed methods design. 384 young people were selected from South-West Nigeria while 25 experts were selected for the Delphi exercise that was used to validate the strategic action plan with stakeholders in phase two.

Results: 50.5% of respondents smoked tobacco while 45.1% smoked substances other than tobacco. Of great concern was that 91.2% of respondents who smoked admitted to smoking before breakfast within the past 30 days. 68.1% of young smoker are not willing to quit smoking despite their knowledge on the risks associated with smoking.

Conclusion: Urgent response to young people's lifestyle by developing/implementing a strategic action plan that can reduce smoking and reverse the tragedy that may be posed by smoking related non-communicable diseases is recommended.

Keywords: Young people; Perception; Health; Lifestyle; Smoking; Non-communicable diseases.

Introduction

The Public Reference Bureau (PRB) reveals that over one-third (approximately 360 million) of Africa's population are young people between the ages of 15 and 24 years [1]. By 2050, these young people will have grown to become adult (age 45 years and over); a period when NCDs predominantly present themselves. A review of literature has revealed that adolescence and young adulthood signifies a period of experimentation, identity development and establishment of lifetime behavior patterns. Thus, when unhealthy lifestyle (such as smoking) and consumption of harmful substances get carried on into adulthood, they become difficult to modify and the greater the risk of abuse and addiction later in life [1-3]. A lifestyle of tobacco smoking is regarded as risky, and one of the leading causes of avertable NCD deaths [4]. Therefore, interventions that address the risk factors of NCDs, support positive health behaviors and discourage harmful ones among young people can significantly change the projected impact of NCDs in Africa. Failure to take urgent action to curb the engagement of young people in smoking will add substantial pressure on already overburdened health systems [1].

Non-communicable disease is neither infectious nor transmissible. It is a disease that progresses or develops slowly over a long period of time [5]. The disease presents a significant burden on health, human potential and the economy [6]. The WHO documented that some NCDs develop from tobacco smoking, which is listed as one of the risk factors of NCDs and the main focus of this study [7]. Smoking is the act of inhaling and exhaling the smoke formed by the burning of an element (such as tobacco in a cigarette, pipe or cigar) through the mouth [8]. Tobacco smoking (both smoking and smokeless tobacco products) has been listed as an unhealthy lifestyle and a leading cause of poor health which is accountable for an annual mortality of over 7 million people [9]. The risks associated with smoking as compiled in a report by the PRB are said to include disease, disability, and death worldwide; as smokers stand a greater risk of developing cardiovascular disease, circulatory diseases, non-communicable lung disease (COPD), cerebral hemorrhages, type 2 diabetes as well as impede the healing of wound [9,10]. About one in 10 young people have been found to smoke cigarettes, and at the same time use other tobacco products such as chewing tobacco, snuff and pipes

in Africa [1]. Research also shows that early initiation into smoking leads to tobacco addiction and early exposure to NCD risks, thereby accelerating the onset of NCDs across the life course [11]. Smokers eventually die earlier by a decade or more, than non-smokers due to consistent inhalation of substances which contain tar or nicotine [12].

The rapid youth population growth makes their health status very critical, not only as a determinant of future population health, but also for economic and social development [13]. Thus, there is a need to invest in the health of young people in order to secure the future of our country. Unfortunately, young people's health has been basically overlooked by the global public health system because young people are usually perceived as healthy [13]. Despite WHO's warning against the growing number of smoking related NCD cases, young people seem to be ignorant of the weight of unhealthy behaviors on their health, thereby making it less likely for them to get involved in activities that promote health [2,14]. Africa has the world's youngest population, with approximately 360 million young people and by 2050, these young people will have grown to become a population age of 45 and over; the age when NCDs primarily present themselves. Hence the need for this study Inculcating healthy lifestyle in young people today will be easier than changing deep rooted risky lifestyle patterns later in life [15]; as failure to take exigent action to reduce NCDs will further add pressure on already overloaded health systems in Nigeria [1]. The aim of this study is therefore to develop a strategic action plan that can be implemented to reduce smoking and control smoking related non-communicable disease among youths.

Materials and Methods

Study design

The study adopted a mixed methods design in two phases to gather facts from respondents and Delphi participants.

Study population

Five million youths (15–24 years) in the South-West Nigeria formed the population for phase one while 73 professors and senior lecturers (Group 1), 68 senior nurses/matrons (group 2), 10 medical doctors/consultants working for NGOs (group 3), 33 directors in the government ministries (group 4), and 13 directors in the government agencies (group 5) formed the population for phase two from which the Delphi panellists were drawn.

Sample and sampling technique

In phase one, a sample size of 384 young people was drawn from the overall population using Krejcie and Morgan's table for determining sample size [16]. Using convenience sampling, six tertiary institutions (one from each state) from the 64 tertiary institutions within South-West Nigeria were selected. Stratified convenient sampling technique was then utilized to draw respondents from each tertiary institution based on the total population of each individual institution in order to ensure even representation per institution. In phase two, 25 experts were selected as panelists for the Delphi exercise.

Inclusion criteria

In Phase one, only universities accredited by the National Universities Commission were included in the study. The criteria for expert's selection was that academics must be professors, the experts from government ministries must be directors, nurses must be senior registered nurses/matrons, the experts from government agencies must be directors, and the medical personnel must be doctors/consultants working for NGOs.

Data analysis

Numeric data was collected via a closed ended questionnaire and analyzed using the IBM SPSS statistical software program, version 23.0. Descriptive statistics were done, and frequency distribution tables were constructed. Data from Delphi rounds were analyzed by using simple percentages to rate the level of consensus of panelists' responses on all items contained in the assessment tool. Both instruments were pre-tested and adjusted before use. The narrative data were analyzed using content analysis which was done by using open and axial coding to convert raw data into categories based on valid interpretations through the process of breaking down, groping, and categorizing data. The strategic action plan was then adapted, and the process was repeated until 75% consensus was reached. The protection of both the rights of individual respondents and the tertiary institutions was ensured.

Ethical principle

The ethical principles of informed consent/assent, autonomy, justice, fidelity, confidentiality, anonymity, non-maleficence and beneficence were strictly adhered to.

Results

Findings: Phase one

This study's findings revealed that 50.5% (n=194) of the respondents smoked (Table 1) out of which one hundred and 42 (f=69.6%) were males and 52 (f=28.9%) were females. Data illustrated in Table 1 also indicated that 45.1% (n=173) of respondents smoked substances other than tobacco.

Of the 194 respondents who were smokers at the time of data collection, an alarming proportion of respondents (91.2%; F=177) admitted to smoking before breakfast within the past 30 days (Table 2). The implication of these findings is that the pattern of tobacco smoking among young people in South-West Nigeria is of concern. Analysis of data on the reasons for smoking tobacco products, smoking other substances, as well as why they prefer to smoke before breakfast revealed that respondents smoke to improve appetite (2 responses), relief stress (28 responses), satisfy their curiosity (69 responses), have fun (12 responses), feed addiction (15 responses), reduce boredom (22 responses), improve poor social life (23 responses), affordability (11 responses), enjoy a feeling of 'highness' (101 responses) and avert depression (23 responses).

Table 1: Smoking of tobacco products and substances other than tobacco (N=384)

Response	Male (n=204)		Female (n=180)		Combined sexes	
	F	F=%	F	F=%	F	F=%
Tobacco						
Yes	142	69.6	52	28.9	194	50.5
No	62	30.4	128	71.1	190	49.5
Total	204	100	180	100	384	100
Substances other than tobacco						
Yes	162	79.4	11	6.1	173	45.1
No	42	20.6	169	93.9	211	54.9
Total	204	100	180	100	384	100

Table 2: Smoking before breakfast, within the past 30 days (n=194)

Response	F	F=%
Yes	177	91.2
No	17	8.8
Total	194	100

Respondents provided information on how they got introduced to smoking. There were parents (31 responses), extended family members (25 responses), peers (104 responses), the media (7 responses), and personal choice (27 responses). This study revealed that majority (91.3%; F=177) of the respondents who smoked got initiated into smoking when they were between the age of 11 and 20 years (Tables 3 and 4).

Table 3: Age of first Initiation to smoking (n=194)

Response	F	F=%
10 years and below	8	4.1
11-15 years	81	41.8
16-20 years	96	49.5
Above 20years	9	4.6
Total	194	100

Table 4: Decision to quitting smoking (N=384)

	Yes		No		Uncertain	
Decision	n	f=%	n	f=%	n	f=%
Able to Quit smoking	53	27.3	132	68.1	9	4.6

The study findings in Table 4 showed that a worrisome percentage (68.1%) of young people who smoked are not keen on quitting smoking despite their understanding of the risks associated with smoking.

Discussion

Tobacco smoking is listed as a leading cause of poor health and a risk factor for NCDs which is responsible for over 7 million deaths yearly [9]. This study's findings revealed that 50.5% (n=194) of the respondents smoked. This sharply contrasts with the findings from studies conducted in Malaysia and India; where tobacco smoking among young people had low prevalence rates of 14.6% and 22.1% respectively [17,18]. The result of this study showed a significant difference (f=69.6% and f=28.9% respectively) between male and female smokers. A similar study in Peninsular Malaysia found that smoking prevalence was also significantly higher among males (72.1%) than females (27.9%) [17]. These findings suggests that tobacco smoking among young people in South-West Nigeria is alarmingly on the rise and public health plans should be fixated on preventing young people from getting initiated into risky behavior like smoking [19].

Table 2 indicated that out of the 194 respondents who were smokers at the time of data collection, the proportion of respondents (91.2%; F=177) that admitted to smoking before breakfast within the past 30 days is of great concern. The implication of this findings is that this might suggest a trajectory of nicotine dependence among young people, indicated by the need to smoke before breakfast. Similar studies by Bhattacharyya et al and Eldalo [20,21] also reported 18.2% and 50% smoking prevalence among young people who smoked in the early morning on an empty stomach; thereby revealing a higher possibility of nicotine dependence [22]. Although the types of other substances young people smoked were not identified in this study, a large number of respondents (45.1%) admitted that they smoke substances other than tobacco which are equally dangerous to their health [11]. Other studies revealed that substances such as bidi, hookah, cigars, pipes, and ganja are common among young people [23]. Aside from these harmful substances, scholars asserted that young people also smoke tendu leaves, marijuana, snus, lozenges, Shisha and strips [11,22,24]. A number of scholars have documented that young people engage in smoking for different reasons [25]. Respondents provided their individual reasons for smoking tobacco products, smoking substances other than tobacco, as well as smoking before breakfast. Respondents indicated this by saying that:

"I always smoke anytime I feel stressed out"

"I just wanted to know how it feels to smoke"

"I like smoking in order to improve my depressed mood"

Aside from respondents who reported that smoking improves their appetite which were contradictory to literature evidence that smoking tobacco and other tobacco products may reduce food intake by acting as an appetite suppressant [26]; other motivations such as Stress, curiosity, fun, depression, addiction, boredom, poor social life, stronger effect in the body, taste and texture of substance were be-

ing described in the literature as a reflection of young people' vulnerability to smoking [25,27,28]. Respondent who smoked before having breakfast mentioned habit, inability to eat without first smoking and addiction as reasons for doing so as also reported in the literature [29,30]. Some respondents stated that:

"Smoking before breakfast is what I practice a lot because it has become more of a habit I may not be able to drop"

"Smoking before breakfast makes me crave for food"

"Can I ever do without first smoking in the morning? Laughs! I don't see that happening to me because it is my addiction. I cannot do without"

The reason may well be their nicotine dependency as people who smoke very early in the morning experience greater nicotine addiction than smokers who have their first cigarette later in the day [31]. When smokers start to smoke at a young age, they become addicted to tobacco and their exposure to risks of developing NCDs increases [32]. Unfortunately, addictions become extremely difficult to overcome later in life, thereby accelerating the onset of non-communicable diseases across the life course [33]. Smoking is a behavior learned through the phases of preparation, initiation, experimentation, habitual smoking, and addiction [34]. Unfortunately, young tend to copy risky behaviors and are therefore more likely to smoke if their 'significant others' smoke [35]. The theory of Planned Behavior (TPB) explicates that young people's behaviors are influenced by those they recognize as 'the significant others' (peers, friends and family members) who play important roles in their daily activities. If these 'significant others' regard a particular behavior as either positive or negative, young people get driven to meet their expectations [36]. This indicates that their attitudes towards healthy and unhealthy/risky lifestyle behaviors entail the influence of compelling social power on individual choices of either living a healthy or unhealthy/risky lifestyle. This theory therefore explains that the stronger young people's motivation to have a healthy behavior is, the more likely it is that they will actually perform that behavior and vice versa [36]. Respondents provided information on how they got introduced to smoking. There were parents (31 responses), extended family members (25 responses), peers (104 responses), the media (7 responses), and personal choice (27 responses). Respondents mentioned that:

"My father smokes and I do too"

"Of course my peers introduced me to smoking"

"My mentor Lil Wayne smokes Cigar! Try to follow him on twitter. You will fall in love with him and start smoking too"

"I saw the advertisement on TV and I went and bought it"

As indicated in Table 3, 4.1% of the respondents got initiated into smoking when they were 10 years or younger, 41.8% started smoking between the age of 11–15 years, 49.5% between the age of 16–20 years, while 4.6% started smoking when they were older than 20 years. Findings from studies conducted in Indonesia, Korea and India [23,37] also confirmed that most young people try to smoke at a young age, substantiating the findings of this study. The reluctance to quit smoking was highlighted in the study findings that revealed that 68.1% of young people who smoked are not willing to quit smoking despite their knowledge of the risks connected to smoking and smoking cessation as a contributory features to good health which was not valued by the young people who participated in this study (Table 4). Therefore, interventions that discourage smoking among young people such as the development and implementation of a strategic action plan that can reduce smoking can significantly change the projected impact of smoking related NCDs.

Strategic action plan to reduce smoking and control smoking related non-communicable diseases in South-West Nigeria

A strategic action plan is a set of actions which provides a structure for the execution and monitoring of outlined activities jointly agreed upon by all involved stakeholders. An action plan entails planning what should be done, how to do it, when to do it, which must do it, and the resources that must be put together to get it done. In this study, the presentation of the strategic action plan was guided by the principles which stipulate comprehensive, efficient, inclusive, informative, logical, and transparent action plan. The strategic action plan was developed by considering all the significant options and expected impacts. This included the strategy that must be addressed, the action statements, methods of carrying out the actions, time frames, and the institution/people responsible for taking actions (Table 5). The aim of the strategic action plan is to provide a structured set of actions that can be implemented by persons within a specific timeframe to inform young people about the risks of smoking, in an attempt to decrease their levels of exposure to risks, and ultimately decrease smoking related NCDs. The strategic action plan included the following:

Table 5: Delphi rounds on an action plan to reduce smoking and control smoking-related non-communicable diseases

			Round-1 response			Round-2 response		
			n	f=%	Consensus reached	n	f=%	Consensus
Strategy (n=25; N=25)	Initiate interventions to reduce tobacco smoking among young people (15–24 years) by 25%.	Agree	23	92	YES	n/a	n/a	YES
		Disagree	2	8		n/a	n/a	
Action statement (n=25; N=25)	Control tobacco accessibility to young people (15–24 years).	Agree	25	100	YES	n/a	n/a	YES
		Disagree	0	0		n/a	n/a	

Method 1.1.1 (n=25; N=25)	Develop a policy to control tobacco sales to young people (15–24 years).	Agree	25	100	YES	n/a	n/a	YES
		Disagree	0	0		n/a	n/a	
	1. A committee of two doctors working in public health departments and two public health nurses appointed by the director of non-communicable disease division (NCDD), state ministry of health, Nigeria.		3	12	NO	1	4	
	2. The commissioner for health assisted by a committee of two doctors and two public health nurses working in public health department appointed by the director of non-communicable disease division (NCDD), state ministry of health, Nigeria.		13	52		22	88	
	3. A committee of two doctors working in public health departments and two public health nurses appointed by the director of health, local government service.		3	12		0	0	
	4. Two health practitioners (one public health nurse and one doctor), seconded by the directors of Non-communicable disease division (NCDD), each from the state ministry of health and from the local government service.		1	4		1	4	
	5. Educators from chattered institute of corporate mentoring and coaching, Nigeria (CICMCN) assisted by educators from Mould Africa; who work with young people on a daily basis.		4	16		0	0	
	6. Director of the department of community development, local government service assisted by community liaison officers from the local government.		1	4		1	4	
Time frame within which to develop and finalise the policy to control tobacco sales to young people (15–24 years) (n=25; N=25)	1. 6 months		17	68	NO	22	88	
	2. 9 months		3	12		3	12	YES
	3. 12 months		4	16		0	0	
	4. 18 months		1	4		0	0	
Method 1.1.2 (n=25; N=25)	Present the policy to control tobacco sales to young people (15–24 years) to the state house of assembly through the house of assembly commission.	Disagree	0	0		n/a	n/a	
Responsible person/s for the presentation of the policy to control tobacco sales to young people (15–24 years) to the state house of assembly through the house of assembly commission (n=25; N=25)	1. The commissioner for health		23	92	YES	n/a	n/a	YES
	2. Supervisor for health		0	0		n/a	n/a	
	3. Local government legislators		0	0		n/a	n/a	
	4. Director of the department of community development		2	8		n/a	n/a	
Time frame within which to present the policy to control tobacco sales to young people (15–24 years) to the state house of assembly (n=25; N=25)	1. 3 months		17	68	NO	24	96	
	2. 6 months		5	20		1	4	YES
						0	0	
	3. 9 months		2	8		0	0	
	4. 12 months		1	4				

Method 1.1.3 (n=25; N=25)	Include the policy in the constitution of the state.	Agree	24	96	YES	n/a	n/a	YES
		Disagree	1	4		n/a	n/a	
Responsible person/s to include the policy to control tobacco sales to young people (15–24 years) in the constitution of the state (n=24; N=25)	1. Members of the state house of assembly		21	87.5	YES	n/a	n/a	YES
	2. The commissioner for health		1	4.2		n/a	n/a	
	3. Supervisor for health		0	0		n/a	n/a	
	4. Local government legislators		0	0		n/a	n/a	
	5. State house of assembly commission		2	8.3		n/a	n/a	
Time frame within which to include the policy to control tobacco sales to young people (15–24 years) in the constitution of the state (n=24; N=25)	1. 6 months		18	75	YES	n/a	n/a	YES
	2. 9 months		4	16.6		n/a	n/a	
	3. 12 months		1	4.2		n/a	n/a	
	4. 18 months		1	4.2		n/a	n/a	
Method 1.1.4 (n=25; N=25)	Ensure enforcement of the law that controls tobacco sales to young people (15–24 years).	Agree	25	100	YES	n/a	n/a	YES
		Disagree	0	0		n/a	n/a	
Responsible person/s to ensure enforcement of the law that controls tobacco sales to young people (15–24 years) (n=25; N=25)	1. Officials of the National Drug Law Enforcement Agency (NDLEA)		18	72	NO	1	4	YES
	2. Officials of the Nigerian Customs service (NCS)		0	0		0,1	0,4	
	3. Officials of the Nigerian Police force (NPF).		1	4		3	12	
	4. Task force constituted by the state ministry of health.		6	24		20	80	
Time frame within which to commence the enforcement of the law that controls tobacco sales to young people (15–24 years) (n=25; N=25)	1. 3 months		19	76	YES	n/a	n/a	
	2. 6 months		3	12		n/a	n/a	YES
	3. 9 months		2	8		n/a	n/a	
	4. 12 months		1	4		n/a	n/a	

1. Strategy: Initiate interventions to reduce tobacco smoking among young people (15–24 years) by 25%.

2. Action statement: Control tobacco accessibility to young people (15–24 years).

3. Methods:

a) Develop a policy to control tobacco sales to young people (15–24 years).

b) Present the policy to control tobacco sales to young people (15–24 years) to the state house of assembly through the house of assembly commission.

c) Include the policy in the constitution of the state.

d) Ensure enforcement of the law that controls tobacco sales to young people (15–24 years).

4. Responsible person/s for the methods.

5. Time frame required achieving the methods.

As illustrated in Table 5, 25 panellists accessed the draft strategic action plan and completed the validation tool. They were asked to indicate their level of agreement with every strategy and action statement, the method to be adopted in order to achieve the action statements, the person/s who will have to take responsibility for achieving the methods, as well as the recommended time frame within which every method must be achieved. The validation of the stra-

tegic action plan was done and the following were achieved in the first round:

Strategy

- 92% consensus (n=23; N=25) was reached on the strategy to initiate interventions to reduce tobacco smoking among young people (15-24 years) by 25%.

Action statement

- 100% consensus (n=25; N=25) was reached on the control of tobacco accessibility to young people.

Methods

Method 1: 100% consensus (n=25; N=25) was reached that a policy to control tobacco sales to young people (15–24 years) must be developed.

Method 2: The panellists reached 100% consensus (n=25; N=25) that the policy to control tobacco sales to young people (15–24 years) should be presented to the state house of assembly through the house of assembly commission.

Method 3: 96% consensus (n=24; N=25) was attained that the policy to control tobacco sales to young people (15–24 years) should be included in the constitution of the state.

Method 4: Panellists reached 100% consensus (n=25; N=25) that enforcement of the law that control tobacco sales to young people (15–24 years) must be ensured.

Responsible persons for methods 1-4

- 92% consensus (n=23; N=25) that the commissioner for health should be responsible for the presentation of the policy to the state house of assembly through the house of assembly commission after the finalisation of the policy (method 2).
- 87.5% consensus (F=21; n=24) was reached that members of the state house of assembly should be responsible for the inclusion of the policy in the constitution of the state (method 3).
- Consensus was not reached on who the responsible person/s to implement the methods neither was there agreement on the timeframes within which the actions/objectives should be reached.
- Consensus was not reached on who the responsible person/s for the development of a policy to control tobacco sales to young people (15–24 years) (method 1) should be, or who should be responsible for the law enforcement for the control of tobacco sales to young people (method 4).

Time frame required achieving methods 1-4

- Panellists reached 75% consensus (n=18; N=24) that the developed policy should be included in the constitution of the state within 6 months after presenting the policy to the state house of assembly (method 3).
- 76% consensus (n=19; N=25) was reached that law enforcement to control tobacco sales to young people should commence within 3 months after the policy is included in the constitution of the state (method 4).
- Consensus was not reached on the time frame within which the policy to control tobacco sales to young people (15–24 years) should be developed (after acceptance of the strategic action) (method 1); neither on the time frame within which the policy should be presented to the state house of assembly (method 2).

In the second round, the second draft strategic action plan with embedded assessment tool was assessed and completed by the panellists, similar to that of the first round. Thus, the aspects where consensus was not reached, as well as the suggestions of the panellists that were included in the second draft strategic action plan, were represented in round 2. In an attempt to avoid repetition, only the findings relating to parts where consensus was not reached, is discussed in full in this round.

As illustrated in Table 5, the following were achieved in the second round:

Note: pertaining to Strategy, action statement and methods, Consensus was reached in round one.

Responsible persons (relating to methods 1 and 4)

- Consensus was reached (f=88%; n=22; N=25) that the commissioner for health must take responsibility to develop the policy to control tobacco sales to young people. The commissioner of health must be assisted by a committee of two doctors and two public health nurses working in the public health department, appointed by the director of Non-communicable disease division (NCDD), state ministry of health in Nigeria (method 1).
- 80% consensus (n=20; N=25) was reached that both the officials of the National Drug Enforcement Agency (NDLEA) as well as a task force constituted by the state ministry of health must be responsible to ensure the law enforcement of the control of tobacco sales to young people (method 4).

Time frame (relating to methods 1 and 2)

- Consensus was attained (88%; n=22; N=25) that the policy to control tobacco sales to young people should be developed within the period of 6 months after its approval by the ministry of Health (method 1).
- Consensus (96%; n=24; N=25) was reached that the policy must be presented to the state house of assembly through the house of assembly commission within 3 months after the development of the policy (method 2).

The data were analysed and presented, as described in Table 5. At least 75% consensus was achieved on all the items in the second draft strategic action plan; hence, the Delphi rounds were concluded.

The panellist validated the draft strategic action plan and reached consensus that the action plan can be implemented to reduce smoking in order to control smoking related NCDs in South-West Nigeria and presented in (Table 6).

Table 6: The validated strategic action plan to reduce smoking and control smoking-related non-communicable diseases in South-West Nigeria

Strategy	**Initiate interventions to reduce tobacco smoking among young people (15–24 years) by 25%**
Action statement	Control tobacco accessibility to young people (15–24 years)
Method 1	Develop a policy to control tobacco sales to young people (15–24 years)
Responsible person/s	The commissioner for health assisted by a committee of two doctors and two public health nurses working in public health department appointed by the director of Non-communicable disease division (NCDD), state ministry of health, Nigeria
Time frame	The policy to control tobacco sales to young people must be developed within 6 months after the strategic action plan is approved by the ministry of Health
Method 2	Present the policy to control tobacco sales to young people (15–24 years) to the state house of assembly through the house of assembly commission
Responsible person/s	The commissioner for health
Time frame	The policy must be presented to the state house of assembly through the house of assembly commission within 3 months after developing the policy to control tobacco sales to young people (15–24 years)
Method 3	Include the policy in the constitution of the state
Responsible person/s	Members of the state house of assembly
Time frame	The policy should be passed into law within 6 months after approval of the policy by the state house of assembly
Method 4	Ensure enforcement of the law that controls tobacco sales to young people (15–24 years)
Responsible person/s	A combination of officials of the National Drug Enforcement Agency (NDLEA) and Task force constituted by the state ministry of health
Time frame	The enforcement of the law that control tobacco sales to young people must commence within 3 months after passing the policy into law

Conclusion

Building on the findings of phase one of this study, a strategic action plan to reduce smoking and control smoking related non-communicable diseases was developed. Experts validated the strategic action plan in two e-Delphi rounds to reach consensus on every strategy, action statement, method to be employed to achieve the objectives of the action statements, responsible person/s to implement the methods to achieve the action statements and the timeframes within which the actions/objectives should be reached. Although it was challenging in some of the selected tertiary institutions to gain approval to conduct the study because of long bureaucratic procedures, the study achieved its proposed aim in the two phases. Phase 1 of the study, which was the preliminary step that led to the development of the strategic action plan, was carried out in tertiary institutions where youths were found in large numbers at the same time. This enabled the researcher to access the target population with ease and a 100% questionnaire return rate was attained. In Phase 2, the Delphi technique (qualitative) was used to validate the developed strategic action plan with various stakeholders. The effective implementation of the strategic action plan across all South West regions may therefore demands that it be given high priority in national development programs.

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Authors Contribution

Authors have contributed 100%

Ethical Permissions

Ethical approval for the study was obtained from the Health Research Ethics Committee of the Department of Health Studies, University of South Africa with the ID Rec-240816-052. Approval to conduct this study was obtained from the gatekeepers of all six tertiary institutions. To ensure informed consent for the protection of respondents' rights, a written information letter was provided. Parental/guardian permission was obtained for minor respondents. The nature, purpose and benefits of the study were thoroughly explained to the respondents in an information leaflet. This research was strictly guided by the principles of autonomy, justice, fidelity, confidentiality, non-maleficence and beneficence.

Conflicts of Interests

No conflict of interest was declared.

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