

Supplementary Material 1: Profile of the included articles

S/N	Author(s)/year	Design	Setting	Theme – cause/risk factor
1.	Punab et al 2017	Prospective study	Estonia	Biological/Physiological
2.	Ahmed et al 2010	Retrospective study of case notes	Nigeria	Biological/Physiological
3.	Okonofua et al 2005	Case-control study	Nigeria	Biological/physiological; Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication); Socio-demographic risk factors
4.	Osazuwa et al 2013	Case-control study	Nigeria	Biological/Physiological; Socio-demographic risk factors
5.	Smolak et al 2019	Systematic Review	Middle East and North Africa	Biological/Physiological
6.	Abarikwu, 2013	Review	Nigeria	Biological/Physiological; Environmental Risk Factors
7.	Olayemi, 2010	Review	Unspecified	Biological/physiological; Other behavioural/lifestyle factors such as excessive intake of antioxidants, illicit drugs etc. Environmental Risk Factors
8.	Olooto, 2012	Review	Unspecified	Biological/physiological; Other behavioural/lifestyle factors such as excessive intake of antioxidants, illicit drugs etc. Environmental Risk Factors
9.	Sengupta et al 2017	Systematic Review	African Population	Biological/physiological; Other behavioural/lifestyle factors such as excessive intake of antioxidants, illicit drugs etc.; Environmental Risk Factors Socio-demographic risk factors
10	Uadia & Emokpae, 2015	Review	Nigeria	Biological/physiological; Other behavioural/lifestyle factors such as excessive intake of antioxidants, illicit drugs etc.; Environmental Risk Factors
11	Jeje et al 2016	Retrospective study of case notes	Nigeria	Biological/Physiological

12	Garba-Alkali et al 2018	Cross-sectional study	Nigeria	Biological/physiological; Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication, Body mass index) Other behavioural/lifestyle factors such as excessive intake of antioxidants, illicit drugs etc.
13	Idrisa et al 2001	Retrospective study of case notes	Nigeria	Biological/Physiological
14	Enwurua et al 2016	Case-control study	Nigeria	Biological/Physiological
15	Emokpae et al 2009	Observational Study	Nigeria	Biological/Physiological
16	Ugwuja et al 2008	Cross-sectional study	Nigeria	Biological/Physiological; Socio-demographic risk factors
17	Folkvord et al 2005	Cross-sectional study	Zimbabwe	Biological/physiological; Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication)
18	Ibadin et al 2009	Case-control study	Nigeria	Biological/Physiological
19	Osegbe & Amaku 1985	Prospective study	Nigeria	Biological/Physiological
20	Bayasgalan et al 2004	Prospective Case-control study	Mongolia	Biological/physiological; Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication)
21	Wright et al, 2014	Review	Unspecified	Biological/Physiological
22	Mahboubi et al 2014	Case-Control study	Turkey	Biological/physiological; Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication); Socio-demographic risk factors
23	Khalil et al 2012	Case-control study	Egypt	Biological/Physiological
24	Leisegang et al 2014	Case-control study	South Africa	Biological/Physiological
25	Ferlin et al., 2007	Review	Unspecified	Causes associated with gene/genotype
26	Ferlin & Foresta, 2014	Review	Unspecified	Causes associated with gene/genotype
27	Krausz & Giachini, 2007	Review	Unspecified	Causes associated with gene/genotype

28	Mosaad et al 2012	Case-control study	Egypt	Causes associated with gene/genotype
29	Roshdy et al 2015	Case-control study	Egypt	Causes associated with gene/genotype
30	Omran et al 2018	Case-control study	Egypt	Causes associated with gene/genotype
31	Eloualid et al 2014	Case-control study	Morocco	Causes associated with gene/genotype
32	Ghorbel et al 2014	Case-control study	Tunisia	Causes associated with gene/genotype
33	Ikechebelu et al., 2003	Cross-sectional study	Nigeria	Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication)
34	Emeghe & Ekeke 2017	Cross-sectional study	Nigeria	Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication); Socio-demographic risk factors
35	Ness et al 1997	Literature review	Unspecified	Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication)
36	Durairajanayagam, 2018	Systematic review	Unspecified	Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication) Other behavioural/lifestyle factors such as excessive intake of antioxidants, illicit drugs etc
37	Benbella et al 2018	Retrospective study of medical records	Morocco	Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication)
38	Meri et al 2013	Case-control study	Oman	Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication)
39	Mostafa, 20210	Systematic review	Unspecified	Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication)
40	Bornman et al 1994	Observational study	South Africa	Behavioral/lifestyle risk factors (Smoking, alcohol intake, STD, medication)
41	Abayomi et al., 2018	Cross-sectional study	Nigeria	Behavioral/lifestyle risk factors (Body mass index); Socio-demographic risk factors
42	Hajshafiha et al., 2013	Observational study	Iran	Behavioral/lifestyle risk factors (Body mass index)

43	Keszthelyi et al., 2020	Cross-sectional study	Budapest, Hungary	Behavioral/lifestyle risk factors (Body mass index)
44	Nguyen et al., 2007	Retrospective cohort study	Norway	Behavioral/lifestyle risk factors (Body mass index)
45	Oghagbon et al., 2004	Cross-sectional study	Nigeria	Behavioral/lifestyle risk factors (Body mass index); Socio-demographic risk factors
46	Egwurugwu et al. 2011	Cross-sectional study	Nigeria	Behavioral/lifestyle risk factors (Body mass index)
47	Amah et al. (012	Case-control study	Nigeria	Behavioral/lifestyle risk factors (Body mass index)
48	Alshahrani et al. 2016	Prospective study	Saudi Arabia	Behavioral/lifestyle risk factors (Body mass index)
49	Katib, 2015	Review	Unspecified	Behavioral/lifestyle risk factors (Body mass index)
50	Henkel et al., 2019	Review	Unspecified	Other behavioural/lifestyle factors such as excessive intake of antioxidants, illicit drugs etc.
51	Henkel et al, 2020	Review	Unspecified	Other behavioural/lifestyle factors such as excessive intake of antioxidants, illicit drugs etc.
52	Leisegang et al., 2020	Review	Unspecified	Other behavioural/lifestyle factors such as excessive intake of antioxidants, illicit drugs etc.
53	Inhorn et al., 2008	Case-control study	Lebanon	Environmental Risk Factors
54	Al-Otaibi, 2018	Cross-sectional study	Saudi Arabia	Environmental Risk Factors
55	Saalu & Osinubi, 2009	Review	Unspecified	Environmental Risk Factors
56	Oliva et al. 2001	Observational study	Argentina	Environmental Risk Factors
57	Aneck-Hahn et al. 2007	Cross-sectional study	South Africa	Environmental Risk Factors
58	Akinloye et al., 2006	Case-control study	Nigeria	Environmental Risk Factors
59	Ibeh et al 1994	Case-control study	Nigeria	Environmental Risk Factors
60	Dunson et al., 2004	Prospective cohort study	Europe	Socio-demographic risk factors

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	
Limitations	20	Discuss the limitations of the scoping review process.	
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	

JB1 = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JB1 guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

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