



Student name: Eleonora Krupic
Student ID: 2008937
Module name: Introduction to Research
Module code: BMHP5005
Lecturer name: Dr Eleni Koutsogeorgou

Contents

1. Introduction	3
2. Background.....	4
3. Methods	6
4. Results.....	8
5. Discussion	9
6. Conclusion	11
7. References	11

The Impact of Second-hand Smoking on Children's Health and Interventions to Reduce Second-hand Smoking Related with Children's Harm

1. Introduction

This study is called The Impact on Second-hand Smoking on Children's Health and Interventions to Reduce Second-hand Smoking Related to Children's Harm and as the title suggests, it focuses on the effects of second-hand smoking of parents and caregivers on children in their household and possible ways of dealing with this issue focusing on its impact's reduction.

To fully understand this work, there are some concepts that need to be explained. These concepts are: Second-hand smoking, interventions, children's harm, parents, and caregivers. First, second-hand smoking is often briefly expressed by its abbreviation SHS and means the smoke given by a sender, a smoker of cigarette products, to the recipient, in this case children through the air, for example in a shared household (CDC, n.d.).

Second-hand smoke is formed by two kinds of smoke – from the sender and then straight from the cigarette. The two terms describing these explanations are mainstream and sidestream smoke. In this case, children could be called passive smokers as they receive the smoke although they are not using the tobacco products (American Cancer Society, 2020).

Another important concept is called intervention. It means a person wants to help a difficult or a harmful situation, and so as a result of that, he or she comes up with a plan of action in order to reach the aim – to make a change. It is an intentional act of helping someone in need, even though the person might think everything is under control (Smith, Morrow, Ross, 2015).

In this work, children's harm will be used to express how physically or mentally children suffer. Thus, children's harm will be the state of them suffering and being affected by the impact of second-hand smoking. According to sources, there are four types of children's harm: Emotional or psychological, physical, sexual and neglect harm (Assets Publishing Service, n.d.).

Parents in this work will be understood as a mother or a father of a child. Officially, a parent is a person who gave birth to a child, whether a woman or a man in the meaning, two people are needed to give life and who is officially appointed to be a parent of a certain child (Bedford Borough Council, n.d.).

Finally, caregivers are people who take care of others, whether a family member, friend or a patient, when the care recipient is ill, weak or disabled to do certain activities (John Hopkins Bayview Medical Center, n.d.). In this work, caregivers will be those caring for children.

The aim is to explore second-hand smoking and how parents or caregivers can prevent this issue. To reach the aim, systematic literature review will be applied as a methodology of this research. Four primary research articles will be analysed and these are: A randomised controlled trial of a complex intervention to reduce children's exposure to second-hand smoke in the home by E. Ratschen, R. Thorley, L. Jones, M. O. Breton, J. Cook, A. McNeill, J. Britton, T. Coleman, S. Lewis, then Correlations of indoor second-hand smoking, household smoking rules, regional deprivation and children mental health: Scottish Health Survey, 2013 by I. Shiue, after that Associations between a smoke-free homes intervention and childhood admissions to hospital in Scotland: an interrupted time-series analysis of whole-population data by S. Turner, D. Mackay, S. Dick, S. Semple, J. P. Pell and REFRESH--reducing families' exposure to second-hand smoke in the home: a feasibility study by I. Wilson, S. Semple, L. M. Mills, D. Ritchie, A. Shaw, R. O'Donnell, P. Bonella, S. Turner, A. Amos.

The objectives leading to the exploration of second-hand smoking and the interventions are to analyse previously mentioned relevant sources about second-hand smoking, its harm on children's health and possible interventions parents and caregivers can make. Another objective is to provide recommendations on what interventions parents and caregivers can make to reduce second-hand smoking that has an impact on children's health.

2. Background

This part provides needed contextual information of second-hand smoking, its harm and impact on children's health, and the question of interventions. Moreover, it argues the rationale for the research.

As it has been said, second-hand smoking means breathing the smoke from cigarettes and other tobacco products from the air when someone else is smoking. This does not apply, however, to e-cigarettes. It has been found they do not harm the environment to the same degree as common tobacco products do (NHS, 2021). Second-hand smoking is sometimes also called passive smoking. As the name says, it means a person does not want to smoke but he or she cannot always stop the effects of smoking on other people around. The reason why second-hand smoking is dangerous lies in its chemicals that are toxic and influence how lungs and hear work

(Healthline, 2020). The number of these hazardous parts in a smoke is 7,000 (Centers for Disease Control and Prevention, n.d.).

Second-hand smoking is very dangerous mainly to children because their immune system is not so strong as the one of adults. Children can suffer from cold, or allergies caused by the smoke. Most common and dangerous place is a car and a household with a smoker as the smoke is stuck in the air there. More than that, second-hand smokers may have cancer because of the second-hand smoking situation. It is said smokers exhale more harmful parts than they receive to their lungs (NHS, 2021). It has been found that when there is a mother or a father in a family who smokes, the child will probably start smoking one day as well. In addition, children with parents who smoke may experience problems with playing sports too or even hearing lately in their life (Ben-Joseph, 2019).

As it has been mentioned, the immune system of children is weaker than the one of adults. However, pregnant women are those who can transfer the harm on their babies. Pregnant women should be aware of the possible impacts of both, smoking as well as second-hand smoking as it has a significant impact on their baby. They could give birth earlier or the baby would not be fully developed and healthy as she or he would be expected (Healthy Children, 2017).

In addition, even adults are exposed to second-hand smoke when they are at work where their colleagues are allowed to use tobacco products. People who work in casinos are the ones working in a dangerous environment talking about the air quality (American Lung Association, n.d.).

As it has been said, passive smoking causes many illnesses. One of them is cancer. It, however, depends on many factors, such as how many minutes a person spends in the smoke environment and for how long the smoke has been in the place or what room it is – in the meaning how big it is (Cancer Council, n.d.). One surprising fact is that even half an hour spent in an environment full of smoke is very harmful (Tobacco Stops with Me, n.d.). It is recommended to not smoke inside the household or in a car to keep the air clean from the smoke (Ben-Joseph, 2019).

Smoking indoors is prohibited in some countries. The reason is that second-hand smokers are influenced by the smoke to a high degree too (NHS, 2021). Between the years 1990 and 2019 there has been a significant change seen because of many countries prohibiting smoking inside. Only 20% were lacking to the 100% exposure to passive-smoking for teenagers or younger children (Alla, 2021).

What people might not know is a term called thirdhand smoke. It means the chemicals get stuck into surfaces, for example in household: Walls, chairs, etc. It is harmful too as people touch it without their awareness. As children, especially the small ones, put their hands often in their mouths, these chemicals can get into their bodies (Hays, 2020).

It is also crucial to mention what are the less common or discussed positive sides of not smoking and not being exposed to the smoke. One of them is you are preventing a fire from appearing. Another one is fewer financial means spent on cleaning products and services. Finally, another benefit of not smoking is a person is not wasting time when he or she could be working (Cancer Council, n.d.).

It is obvious second-hand smoking has a great but dangerous impact on children as well as adults. This research will thus aim not only at the deep exploration of harmful effects on children but also at possible interventions. A few recommendations have been already mentioned but there is a gap. Not many articles and studies have been published on deep innovative and practical interventions in particular families. As a result of that, four primary research articles will be analysed to understand this issue, analyse examined interventions and come up with recommendations.

3. Methods

Generally, this work's method is a systematic literature review exploring the impact of second-hand smoking on children's health as well as interventions to reduce second-hand smoking related with children's harm. To follow the systematic-literature-review method, a plan has been developed in the first place. The first step was to start exploring the chosen area of second-hand smoking, its impacts on children and examined interventions in household by reading and understanding background literature and four primary research articles. The process of the literature review continued then with finding similarities, differences, clues, similar themes of the chosen studies. Within the process, it has been analysed whether there is enough of literary sources, such as academic articles or primary research, discussing the topic of second-hand smoking, harm on children's health and possible interventions.

More specifically, four primary research studies have been chosen from a database called PubMed that focuses on articles and other pieces concerning field of biology and medicine (PubMed Labs, 2021). As this work focuses on children's health and the harmful side of second-hand smoking, this database is relevant for finding suitable sources.

To find suitable and relevant sources, keywords are important. These are short expressions that underline content of the certain topic (Hardwick, 2020). To find suitable primary research studies, these keywords have been used: Second-hand smoking, children and smoke environment, interventions towards smoking, second-hand smoking interventions, smoking in household and children.

Another step in conducting a systematic literature review is considering and applying inclusion and exclusion criteria that helps to eliminate studies that are not relevant to the topic or research generally – in the meaning that there are some studies which are not useful because of, for example, their age/long date of publication (Information included in such work might not be up to date.), different location that should be studied, or even unapplicable samples – different respondents than required (Patino and Ferreira, 2018). This work's inclusion criteria are as follows: The chosen studies must be academic articles published between the year 2012 and 2022 because of this field/industry changing quickly. It must be written in the English language. The area of focus must concern second-hand smoking only, interventions towards smoking, children's health, and ways of possible reduction of such cases. It means, the articles should not include the impact of smoking on adult's health, for example. Then, another inclusion criterium is, that the chosen studies must be conducted in the United Kingdom because of focusing on this location for an in-depth insight. In addition, the second-hand smoking topic should be connected to parents and care givers who are the smokers and children from the United Kingdom are those whose health impact is being explored, together with possible interventions. Finally, one of the most important inclusion criteria is that the chosen literary sources must be primary research articles that provide the insight into their methodologies, target respondents, description of the process and precise results.

On the other hand, there are exclusion criteria that means these are the factors or facts that express the specific literary source is not relevant for this systematic literature review, thus is not being used. The first exclusion criterion is, that the study would not be concerning the topic of the impact of second-hand smoking on children's health and interventions to reduce second-hand smoking related with children's harm. The infraction of this topic could be caused by studies exploring the health of pets that live in households with high level of smoke in the air, for example. After that, another exclusion criterion is that the sources would not include data regarding children and their parents or caregivers – these are the key words and key points of the research. In addition, book, magazines, news, videos, secondary literature, reviews, or articles on the internet

are not suitable as this study aims at reviewing primary sources research articles only. Finally, research conducted outside of the United Kingdom is another exclusion criteria for this work.

Coming to the last part of this chapter, it is necessary to mention ethical considerations that can be describes as values that a researcher wants to follow (Bhandari, 2021). The first one that this work is using the right sources that are valid. Then, these sources are being used in the academical way paraphrasing and citing the sources to give credits to the authors and to show the readers where the primary information can be found in case of interest. Other ethical considerations may include keeping the respondent's personal information safe and anonymized; however, this systematic literature review works with already-conducted primary research articles that do not provide this kind of information.

4. Results

In this research, four primary research articles are analysed, and these are:

1.	A randomised controlled trial of a complex intervention to reduce children's exposure to second-hand smoke in the home	by E. Ratschen, R. Thorley, L. Jones, M. O. Breton, J. Cook, A. McNeill, J. Britton, T. Coleman, S. Lewis
2.	Correlations of indoor second-hand smoking, household smoking rules, regional deprivation and children mental health: Scottish Health Survey, 2013	by I. Shiue
3.	Associations between a smoke-free homes intervention and childhood admissions to hospital in Scotland: an interrupted time-series analysis of whole-population data	by S. Turner, D. Mackay, S. Dick, S. Semple, J. P. Pell
4.	REFRESH--reducing families' exposure to second-hand smoke in the home: a feasibility study	by I. Wilson, S. Semple, L. M. Mills, D. Ritchie, A. Shaw, R. O'Donnell, P. Bonella, S. Turner, A. Amos

The aims of these studies were to examine an integrated intervention leading to decreasing the degree of harm caused to children in households by second-hand smoking, the level of success of the TiRO campaign, connections between emotional well-being of children and second-hand smoking in their households and a personal attitude towards reducing smoke environment at households.

Used methodologies in these research studies were the qualitative as well as quantitative ones. The qualitative ones visited chosen families and observed the interventions and the quantitative ones worked with 740 055 documentations from hospitals located in Scotland. All the studies have one in common – their location – the United Kingdom. Families or children studied/observed were in England and Scotland. The specific methods were Randomised controlled trial – scientific experimentation to control specific factors, Questionnaire, interviews, regression analysis, data from hospitals and measurements of the air condition in households as well as interviews. In addition, the range of participants from the four studies differed. All in all, the studies examined a range starting from 59 mothers to 740 055 documents from Scottish hospitals.

All four articles included at least one of the parents/caregivers smoking as well as positive results to a certain level of explored interventions. Then, two out of four studies showed interventions that helped children aged 5 or under (the qualitative study not only motivating mothers but showing them the real side of their air quality at home and the Take it Right Outside campaign). However, only one study discussed the impact of second-hand smoking on children's mental health, more precisely their emotions and behaviour. The other three studies aimed at physical health – asthma predominantly. Furthermore, the themes of the research are children suffering from asthma, educating parents and caregivers about the harmful effects of second-hand smoking, creating household rules smoking outside and difficulties of interventions quitting smoking.

The main finding is that a discussion about the second-hand smoking and its harmful effects play a crucial role in the intervention process. It has been explored, that mothers agree it would be helpful if health visitors would keep providing them with regular motivational discussions about the second-hand situation. In addition, campaign is also a way of discussion. It has been shown it has a small impact leading to a reduction of harmful effects of second-hand smoking on children too. Then, it has been found, that important findings and recommendations for parents are setting up household rules and measuring the air quality in households. More than one study proofed that. Another outcome is that there is a lack of focus on harmful effects of second-hand smoking on children's emotional wellbeing or mental health that also covers children's health. It is a gap that can serve as a motive for another research.

5. Discussion

To provide a summary of the results, second-hand smoking and its harmful effects on children's health have been explored. It has been found that there are many serious issues coming from the

passive smoking and these are: Asthma, cancer, cold, children's limitations while playing sports, few behavioural problems and more. Then, it has been explored that even though interventions to reduce the effects of second-hand smoking are not easy for the smokers, parents or caregivers, it is possible to improve the harmful situation with the creation of household rules, regular air measurements and motivational discussions with health and social care workers.

To provide recommendations for health and social care, GPs and generally people in positions with responsibility for children or their healthy development should be aware of the second-hand smoking issue to educate the people they meet with or to give them the right example. Those people who should then be educated are parents and caregivers of the children. Another recommendation not only for social care workers is that when a person has a visitor in his or her house, it is their responsibility to kindly ask the person to not smoke inside or to utilize the garden (Consultant360, 2021). Thus, these workers may educate their clients or patients about their rights to share their needs when their families come.

Furthermore, as it has been shown, mothers appreciated receiving motivational discussions connected with facts concerning the situation in the form of air measurements in their households. As a result of that, it is recommended to not only provide individual discussions for specific families but to support people to form communities helping each other to overcome harmful smoking as well as to support health and social care workers and communities to organize motivational and educational events, trainings as well as lectures.

It has been explored that even though we do not see the smoke in our households, with air quality measurements the dangerous side of second-hand smoking is being exposed. It is recommended to parents and care givers to regularly check the air quality in their homes. Moreover, it has been shown that cars as well as houses are the places where smoke can be stuck for a long time on walls, chairs, cloths, and other equipment (Kidshealth, 2014).

To reflect on policies discussing this second-hand smoking issue, it has been said many countries have prohibited smoking inside in public places and businesses, such as restaurants or pubs. These countries are, for example, Ireland, Spain, and Malta (European Commission, n.d.). In the United Kingdom, using tobacco products inside restaurants and similar places was restricted in the year 2007 (Trevallion, 2017).

However, restaurants still may have gardens as a space for smoking. The issue is that these gardens may often be a place where children play while their parents enjoy their coffee. Thus, it is recommended to the responsible people taking care of legislations to ensure smoke-free

spaces also in these places as we can see the great and dangerous impact of second-hand smoking. The positive side is that the UK government already started to discuss this issue in the year 2020 (GOV.UK, n.d.).

Coming to the limitations of the research, for further and deeper exploration of this topic, more studies aiming at the impact of parent's second-hand smoking on children's mental health could have been found. Second-hand smoking influences children's physical activities (Kidshealth.org, 2014), and so the emotional state could be further explored.

6. Conclusion

This study was called The Impact on Second-hand Smoking on Children's Health and Interventions to Reduce Second-hand Smoking Related to Children's Harm. It explored the effects of second-hand smoking of parents and caregivers on children in their household and possible ways of dealing with this issue focusing on its impact's reduction. It has been found there are many harmful effects of second-hand smoking, such as cancer, cold, asthma, behavioural problems, physical problems of children at school and much more.

The objectives leading to the exploration of second-hand smoking and the interventions were to analyse previously mentioned relevant sources about second-hand smoking, its harm on children's health and possible interventions parents and caregivers can make, and so four primary research articles were analysed. Another objective was to provide recommendations on what interventions parents and caregivers can make in order to reduce second-hand smoking that has an impact on children's health. These recommendations include creating household rules, undertaking regular air quality measurements, organising educational lectures for parents and caregivers.

Based on the results, the main message is that parents or caregivers have second-hand smoking, that negatively impacts their children, in their hands. Although the interventions are not easy and not all parents are willing to stop or change their smoking habits, they were successful to a certain level as has been shown. One of the possible ways is setting up household rules or measuring the air quality showing the real side leading to changing habits of smoking around children, inside households.

7. References

Alla, F. (2021) 'Second-hand tobacco exposure in children: evidence for action', *The Lancet Public Health*, [online] 6(8), pp. e537–e538. doi:10.1016/S2468-2667(21)00128-6.

American Cancer Society, (2020) '*Health Risks of Second-hand Smoke*', [online]. Available at: <https://www.cancer.org/healthy/stay-away-from-tobacco/health-risks-of-tobacco/secondhand-smoke.html> [Accessed 28 April 2022].

American Lung Association (n.y.) '*Health Effects of Second-hand Smoke*', [online]. Available at: <https://www.lung.org/quit-smoking/smoking-facts/health-effects/secondhand-smoke> [Accessed 28 April 2022].

Assets Publishing Service (n.y.) '*Examples of harm in relation to children*', [online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/500135/Examples_of_harm_in_relation_to_children.pdf [Accessed 28 April 2022].

Bedford Borough Council (n.y.) '*Who is a parent?*', [online]. Available at: <https://www.bedford.gov.uk/schools-education-and-childcare/education-welfare-service/school-attendance-and-the-law/who-is-a-parent/> [Accessed 28 April 2022].

Ben-Joseph, E. (2019) '*Secondhand Smoke*', [online]. Kidshealth. Available at: <https://kidshealth.org/en/parents/secondhand-smoke.html> [Accessed 28 April 2022].

Bhandari, P. (2021) '*A guide to ethical considerations in research*', [online]. Scribbr. Available at: <https://www.scribbr.com/methodology/research-ethics/> [Accessed 28 April 2022].

Booth, A., Sutton, A. and Papaioannou, D. (2016) '*Systematic Approaches to a Successful Literature Review*', [online] Google Books. SAGE. Available at: https://books.google.cz/books?id=JD1DCgAAQBAJ&pg=PA1&hl=cs&source=gbp_toc_r&cad=4#v=onepage&q&f=false [Accessed 28 Apr. 2022].

Cancer Council (n.y.) '*Tobacco*', [online]. Available at: <https://www.cancer.org.au/cancer-information/causes-and-prevention/workplace-cancer/tobacco> [Accessed 28 April 2022].

CDC (n.y.) '*Secondhand Smoke (SHS) Facts*', [online]. Available at: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/general_facts/index.htm [Accessed 28 April 2022].

Centers for Disease Control and Prevention (n.y.) '*Secondhand Smoke*', [online] Available at: https://www.cdc.gov/tobacco/basic_information/secondhand_smoke/index.htm [Accessed 28 April 2022].

Consultant360 (2021) [online]. Available at: <https://www.consultant360.com/articles/smoking-outside-does-it-eliminate-secondhand-smoke-risk> [Accessed 28 April 2022].

European Commision (n.y.) '*Smoke-free environments*', [online]. Available at: https://ec.europa.eu/health/tobacco/smoke-free-environments_en [Accessed 28 April 2022].

GOV.UK (n.y.) '*New plans to ensure pubs, restaurants and cafes offer both smoking and non-smoking outdoor options*', [online]. Available at: <https://www.gov.uk/government/news/new-plans-to-ensure-pubs-restaurants-and-cafes-offer-both-smoking-and-non-smoking-outdoor-options> [Accessed 28 Apr. 2022].

Hardwick, J. (2020) '*What Are Keywords? How to Use Them for SEO*', [online]. SEO Blog by Ahrefs. Available at: <https://ahrefs.com/blog/what-are-keywords/> [Accessed 28 April 2022].

Hays, J. (2020) '*The dangers of thirdhand smoke*', [online]. Mayo Clinic. Available at: <https://www.mayoclinic.org/healthy-lifestyle/adult-health/expert-answers/third-hand-smoke/faq-20057791> [Accessed 28 April 2022].

Healthline (2020) '*Is Secondhand Smoke as Dangerous as Smoking a Cigarette*', [online]. Available at: <https://www.healthline.com/health/secondhand-smoke-facts#bottom-line> [Accessed 28 April 2022].

Healthy Children (2017) '*The Dangers of Secondhand Smoke*', [online]. Available at: <https://www.healthychildren.org/English/health-issues/conditions/tobacco/Pages/Dangers-of-Secondhand-Smoke.aspx> [Accessed 28 April 2022].

Johns Hopkins Bayview Medical Center (n.y.) '*What Is a Caregiver*', [online]. Available at: https://www.hopkinsmedicine.org/about/community_health/johns-hopkins-bayview/services/called_to_care/what_is_a_caregiver.html [Accessed 28 April 2022].

Josette, B.-S. (2012) '*How to Do a Systematic Literature Review in Nursing: A Step-By-Step Guide: A Step-By-Step Guide*', [online]. Google Books. McGraw-Hill Education (UK). Available at: https://books.google.cz/books?id=9pb6ssRt8hwC&pg=PA31&hl=cs&source=gbs_toc_r&cad=4#v=onepage&q&f=false [Accessed 28 Apr. 2022].

Kidshealth (2014) '*Secondhand Smoke (for Parents) – KidsHealth*', [online]. Available at: <https://kidshealth.org/en/parents/secondhand-smoke.html> [Accessed 28 April 2022].

NHS (2021) '*Passive smoking*', [online]. Available at: <https://www.nhs.uk/live-well/quit-smoking/passive-smoking-protect-your-family-and-friends/> [Accessed 28 April 2022].

Patino, C., M. and Ferreira, J., C. (2018) '*Inclusion and Exclusion Criteria in Research studies: Definitions and Why They Matter*', *Jornal Brasileiro De Pneumologia*, 44(2), pp.84–84.

PubMed Labs (2021) '*PubMed Labs*', [online]. PubMed Labs. Available at: <https://pubmed.ncbi.nlm.nih.gov/> [Accessed 28 April 2022].

Ratschen, E. et al (2017) 'A randomized controlled trial of a complex intervention to reduce children's exposure to secondhand smoke in the home', *Tobacco Control*, 27(2), pp.155-162.

Ridley, D., (2012) '*The Literature Review: A Step-by-Step Guide for Students*', [online]. Google Books. SAGE. Available at: https://books.google.cz/books?id=DF-oJ0mstfEC&pg=PA1&hl=cs&source=gbs_toc_r&cad=4#v=onepage&q&f=false [Accessed 28 Apr. 2022].

Shiue, I., (2015) 'Correlations of indoor second-hand smoking, household smoking rules, regional deprivation, and children mental health: Scottish Health Survey', 2013. *Environmental Science and Pollution Research*, 22(13), pp.9858-9863.

Smith, P., Morrow, R. and Ross, D., (2015) '*Types of intervention and their development*', [online] Ncbi.nlm.nih.gov. Available at: <<https://www.ncbi.nlm.nih.gov/books/NBK305514/>> [Accessed 3 May 2022].

Tobacco Stops with Me (n.y.) '*Secondhand Smoke*', [online]. Available at: <https://stopswithme.com/dangers-of-tobacco-products/secondhand-smoke/> [Accessed 28 April 2022].

Trevallion, L. (2017) '*Smoking ban*', [online]. Bhf.org.uk. Available at: <https://www.bhf.org.uk/information-support/heart-matters-magazine/news/smoking-ban> [Accessed 28 April 2022].

Turner, S. et al. (2020) 'Associations between a smoke-free homes intervention and childhood admissions to hospital in Scotland: an interrupted time-series analysis of whole-population data', *The Lancet Public Health*, 5(9), pp. e 493-e500.

Wilson, I. at al. (2012) 'REFRESH—reducing families' exposure to secondhand smoke in the home: a feasibility study'. *Tobacco Control*, 22(5), pp. e8-e8.