

Module: Introduction to research (BMH5005_LON)

Student name: Andreea Bogdan

Student number :1907865

Lecture name: Laila Surani

NUTRITION OF PREGNANT WOMEN IN UK

ASSESSMENT ₁

Abstract

The main purpose of the research is to find the impact of the food intake by pregnant women on a child's birth weight. The methodology section has shown the systematic analysis where data has been collected from qualitative research and a boolean table has been shown in this research. These women faced challenges due to lack of food and felt morning sickness, which has a negative impact on the immunity of the child and has affected the growth of the child. The analytical literature review has shown different themes based on the health of the child and intake of food materials and its impact on child weight. The MD diet has a positive impact on the child and mother and helps to prevent diseases by building strong immunity. Unique synergy of health nutrients help to make MD an effective approach. The articles in the literature review section indicate that improper diet in the pregnant mother can cause low-birth weight in the neonate. The Findings section has shown the mortality rate of the child due to lack of food and improper diet by the pregnant mother. Recommendations and conclusion sections have shown the importance of doctors' guidance and nutritionist advice during the pregnancy phase.

Table of Contents

Assessment 1	5
Chapter 1: Background.....	5
1.1 Background	5
1.2 Rationale	5
1.3 Aim, Objective and research questions.....	5
Chapter 2: Methodology and methods	6
2.1 Introduction	6
2.2 Study design	6
2.3 Search strategy.....	7
2.4 Inclusion exclusion criteria.....	7
2.5 Research Prisma	8
2.6 Data extraction.....	9
2.7 Data analysis	9
2.8 conclusion	9
Chapter 3: Ethical consideration	9
Chapter 4: Thematic Review of literature.....	9
4.1 Introduction	9
4.2 Characteristics of selected studies.....	9
4.3 Design of the study	10
4.4 Theme selection.....	10
4.5 Themes	11
4.6 Conclusion	13
Chapter 5: Findings and discussion	14
5.1 Introduction	14
5.2 Findings.....	14
5.3 Discussion.....	15
5.4 Conclusion	16
Chapter 6: Conclusion and recommendation.....	16
6.1 Conclusion	16

6.2. Linking with objectives	16
6.3 Research limitation	17
6.4 Future scope	17
6.5. Recommendation.....	17
References.....	19
Appendix 1: importance of diet.....	22

Assessment 1

Chapter 1: Background

1.1 Background

Nutrition plays an important role in the daily life of human beings and it is very important for pregnant women to intake healthy foods and a proper diet. In 2018, 839,043 women's were conceived in the UK. However, it is observed that 55.9% of the women were obese and overweight during the pregnancy period (Statista, 2021). Maintaining a nutritive diet is very essential as it reduces the health risks like anemia, morning sickness, and fatigue among the unborn child and pregnant women. Only 14% of the females agreed that maintaining a healthy diet is important in life (Statista, 2021).

1.2 Rationale

Pregnant women in the current days fail to consume a proper diet, which affects the growth and weight of the child. Improper diet is an issue as high sugar and fat diets lead to behavioral problems among the children. Lack of a healthy diet increases the fatality rate of the unborn child and the health risk of pregnant women (Uday and Höglér, 2018).

Lack of proper diet has a negative impact on women giving birth to an infant of bowerbird weight increases chances of neonatal mortality, stunting and lifelong susceptible diseases (McNulty *et al.* 2019). During Covid-19 pandemic pregnant women being affected with the virus increases the threat for the child and faces a vulnerable situation. However, a healthy diet increases the immunity of pregnant women and children, which prevent them from diseases.

1.3 Aim, Objective and research questions

Aim

To know dietary intake of pregnant women and impact on the birth weight of a child

Objective

To explore the diet of pregnant mother age between 20 to 25 and to measure the birth weight of children

Research Question

- How the dietary intake of a pregnant woman can affect the birth weight of a child?

Chapter 2: Methodology and methods

2.1 Introduction

This chapter provides a clear idea on the study design that has been implemented along with search strategy. Inclusion and exclusion criteria help to understand the basis on which journals are selected. Research prisma, data extraction, and Systematic analysis has been done in this chapter along with limitation of the study.

2.2 Study design

Systematic analysis has been used in this research, which helps to draw proper conclusions from representation of various studies. The aim of the research is to know dietary intake of pregnant women and impact on the birth weight of a child. The research question is how the dietary intake of a pregnant woman can affect the birth weight of a child.

A PICO table is applied which helps to focus mainly on the research questions by applying proper theory and knowledge.

Criteria	Determinants
Population	Pregnant women of the UK
Interest	Dietary intake of pregnant women affect child birth weight
Context	Improper diet and lack of food affects pregnant women and children. Issues like covid-19 and vitamins impacts on child health.

Table 1: PICO

(Source: Created by the learner)

2.3 Search strategy

The initial review has been done by taking existing publications of research by authors from databases like Pub Med, EBSCO and Google scholar. No information or data has been collected from JSTOR, EMBASE, and MEDLINE to present the systematic review. PICO has been used in this systematic review to determine the key area, which includes research sample, phenomenal, design, evaluation, and research type that has been used. Logical function in this research study has been determined by using the Boolean table (Usuzaki et al. 2020). The KEY words are “Pregnant woman”, “birth weight” and “Dietary plan”.

Pregnant woman		Birth weight of child		Dietary plan
Pregnant mother	AND	Healthy child Or Low Risk of anaemia	AND	Proper eating habits Or healthy food consumption

Table 3.2: Boolean Table

(Source: Created by the learner)

2.4 Inclusion exclusion criteria

Inclusion Criteria	Exclusion Criteria
- Articles published from 2017 have been used - English based articles are used for this research - Full text and peer reviewed journal are used - Articles on: - Pregnant woman health, dietary plan have been used from qualitative and authenticate sources	- Data earlier to 2017 has not been used and no articles have been selected published before 2017 - Non-English publication has not been used in this research.

Table 3.4: Inclusion and Exclusion Criteria

(Source: Created by the learner)

2.5 Research Prisma

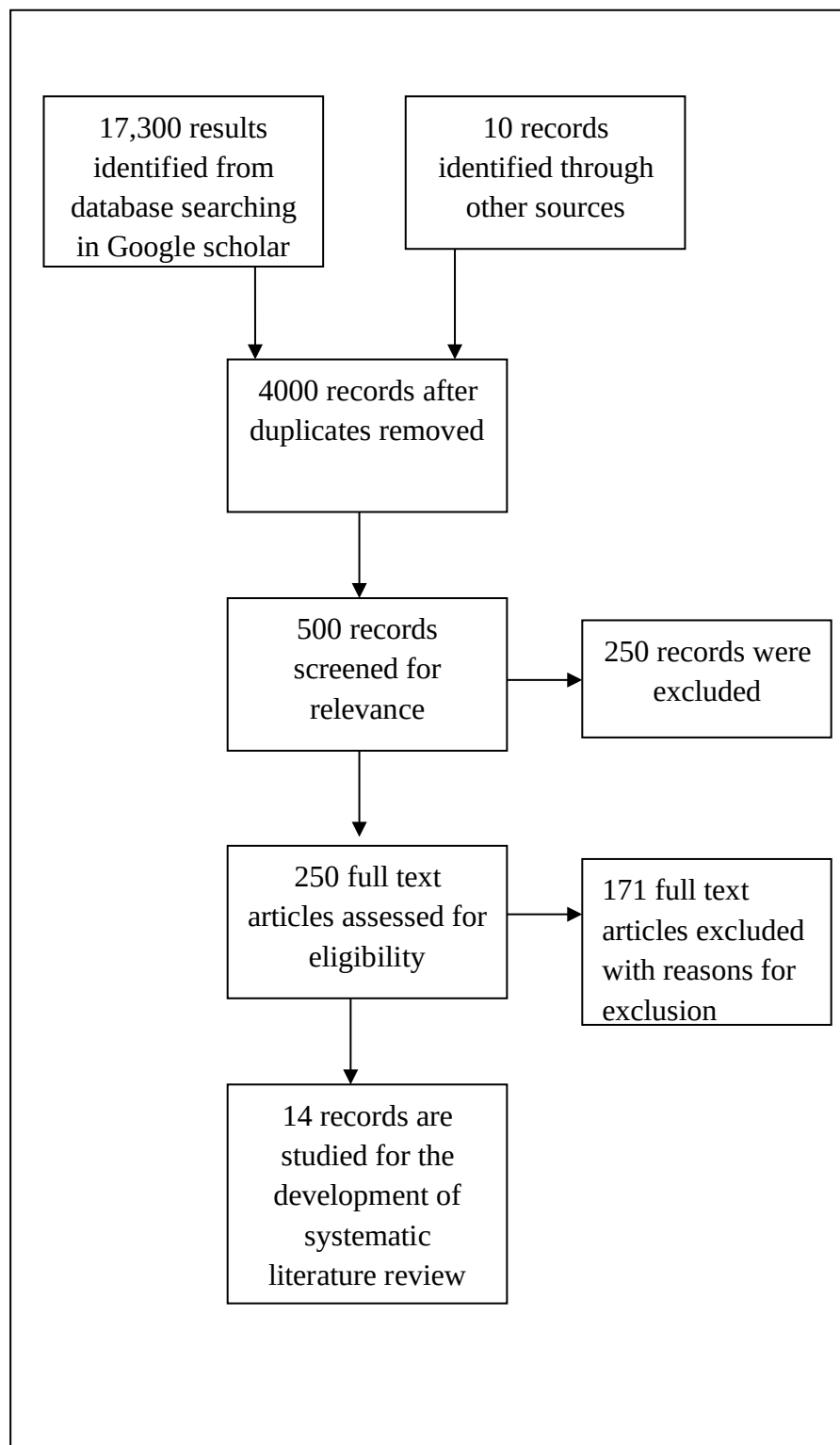


Figure 3.1: Research Prisma

(Created by the learner)

2.6 Data extraction

Collection of data from different journals helps to understand the perspective of the research and the viewpoints of the different authors in terms of the research topic (Cargo and Thomas, 2018). The main purpose of the study is to identify the dietary intake of pregnant women and its impact on the birth weight of the child [refer to appendix 1].

2.7 Data analysis

The systematic review of the research has been established by collecting data from qualitative research articles. It shows the impact of dietary intake of pregnant women on childbirth weight. In order to critically analyse the data collected and understand the outcome the research is done in systematic way to add real-time information and synthesis the data in an informative way (Cargo and Thomas, 2018).

2.8 conclusion

It can be concluded that data have been collected from authenticated sources, which help to meet the aims and objectives of the research. The data earlier to 2017 has not been used for this research and English based publication has been used in this research.

Chapter 3: Ethical consideration

No ethical consideration is required for this study but it helps to evaluate and identify the aim of the research and the way it is beneficial (Abegaz *et al.* 2017). Data have been collected from authenticated journals and no primary research has been followed for which ethical consideration is not necessary in this research study.

Chapter 4: Thematic Review of literature

4.1 Introduction

It covers the research topic on source of limitation and theme selection. Different themes have been selected which show impact on Mediterranean diet pattern, importance of food availability, ethnic disparities in dietary requirements and recommendation on dietary plan, and how inadequate diet in the pregnant mother can cause low birth weight in a child.

4.2 Characteristics of selected studies

Systematic literature review consists of 5 different studies that mainly focuses on the pregnant woman and dietary intake impact on the birth weight of a child. One study shows the impact

on child health when pregnant women face lack of food while other articles effectively discuss the importance of proper diet on the child's birth weight.

4.3 Design of the study

Authenticated articles are used for this research purpose having a qualitative research method to analyze the data by conducting interviews. The main five articles that have been chosen have conducted interviews with the pregnant women of Wales, England and different parts of the UK. The articles contain information that have been collected from face to face interviews and it is used in systematic review.

4.4 Theme selection

The theme that is mentioned and developed in section 4.5 is developed by searching the codes or the keywords mentioned. The research is based on the dietary intake of the pregnant woman and its impact on the childbirth weight. Different keywords that help to choose the theme are "Dietary intake of pregnant woman" "child birth weight" "importance of diet for pregnant woman" which helps to search different authenticated journals and conduct the research effectively.

Author(s), title, and year of publication	Aim of study	Methods and Sample size and characteristics	Summary of main findings
Tucci, M., Martini, D., Del Bo, C., Marino, M., Battezzati, A., Bertoli, S., Porrini, M. and Riso, P., 2021. A mediterranean dietary pattern developed based on the EAT-Lancet reference diet (EAT-IT): A nutritional evaluation. <i>Foods</i> , 10(3), p.558	Impact of Mediterranean dietary plan	5 articles were chosen	MD has a positive impact on the pregnant mother and it is beneficial for the child
Khaled, K., Hundley, V., Almilaji, O., Koeppen, M. and Tsofliou, F., 2020. A priori and a posteriori dietary patterns in women of	Dietary guideline adherence during preconception and	4 articles taken	Dietary guideline help to improve mothers

childbearing age in the UK. <i>Nutrients</i> , 12(10), p.2921.	pregnancy		health and the Childs health
Lundgren, S.N., Madan, J.C., Emond, J.A., Morrison, H.G., Christensen, B.C., Karagas, M.R. and Hoen, A.G., 2018. Maternal diet during pregnancy is related with the infant stool microbiome in a delivery mode-dependent manner. <i>Microbiome</i> , 6(1), pp.1-11.	The influence on the pregnancy outcome due to maternal diet during pregnancy	3 articles taken	Dietary impact on the weight of infant
O'Callaghan, K.M. and Kiely, M.E., 2018. Ethnic disparities in the dietary requirement for vitamin D during pregnancy: considerations for nutrition policy and research. <i>Proceedings of the Nutrition Society</i> , 77(2), pp.164173.	Ethnic disparities in the intensive care of the newborn	4 articles	Complex Ethnic disparities impact on the intensive care of neonate
Roberts, K., Cade, J., Dawson, J. and Holdsworth, M., 2018. Empirically derived dietary patterns in UK adults are associated with sociodemographic characteristics, lifestyle, and diet quality. <i>Nutrients</i> , 10(2), p.177.	Dietary practices in pregnant women	3 articles	Maternal nutrition is important for the birth weight of neonate.

4.5 Themes

4.5.1 Impact of Mediterranean dietary (MD) pattern on child and pregnant women of age between 20 and 25

Environmental factors affect the mother and the child and maternal nutrition is considered one of the most important factors for a child's birth weight. Tucci *et al.* (2021) stated that the

Mediterranean diet legumes, nuts, fruits and especially milk is essential and the pregnant women are required to follow the EAT-IT dietary plan. Saturated fats and antioxidants are suggested to be consumed during the maternity phase. **Social cognitive theory** implementation to educate the pregnant women in the UK has a positive impact on developing proper dietary plan and habits in pregnant women (Edwards *et al.* 2018). The pregnant mother eating dietary foods help to maintain their balance diet that would help to provide a proper birth weight by reducing birth defects in the child (Khaled *et al.* 2020). Low This journal shows cross sectional study on pregnant women and the data collected is through handmade questionnaires.

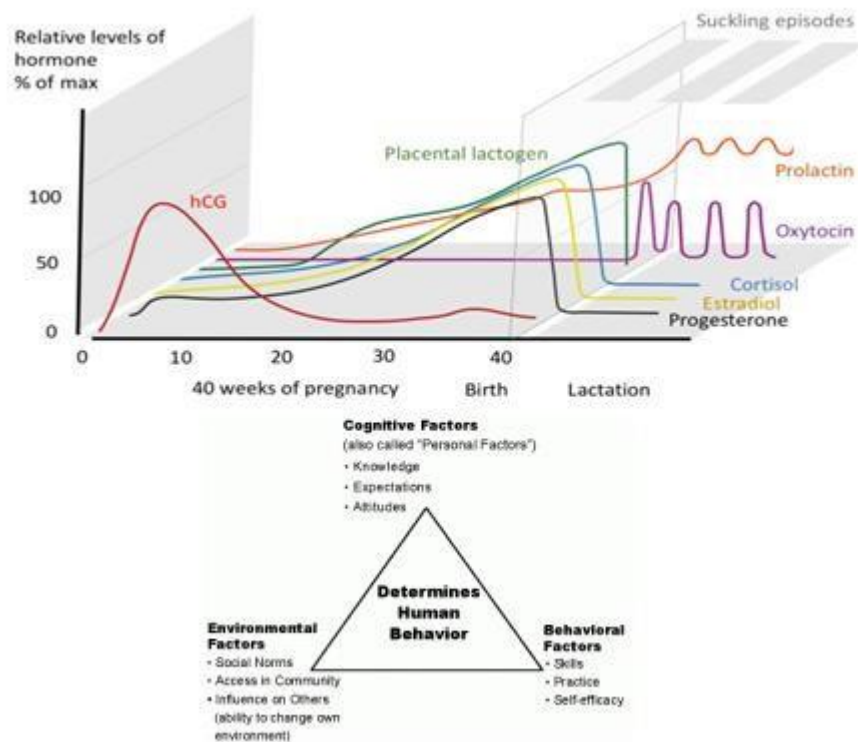


Figure 4.1: Cognitive theory

(Source: Edwards *et al.* 2018)

4.5.2 Importance of availability of food on birth weight and child growth

Low birth weight means that there are high chances for the child to be affected due to low immunity power. On the other hand, O'Callaghan and Kiely (2018) stated that to develop the neonatal weight and to improve the health condition of the pregnant women it is important to have proper diet without being discriminated. However, Khaled *et al.* (2020) stated that it is

relevant to mention that huge availability of food also has a negative impact on the child if it is not consumed based on a proper diet. In the paper of Khaled *et al.* (2020) it was seen that biological changes occur during pregnancy, has been clearly stated in the data provided through quantitative as well as qualitative collected therefore they requires appropriate nutritional diet.. Roberts *et al.* (2018) mentioned that in case the pregnant mother it is important for her to consume nutritious fiber rich diet then there would be positive influence on the childweight. It was also stated that lack of proper intake of diet and food consumption lowers the immunity of the child and leads to poor growth. It is important for pregnant women to avoid consumption of sugar and excess fat to provide better nutrition to the child so that the child can bear between 2.5 kg-4.5 KG. Lack of proper nutrition lowers the potential chances of the development of the brain in the neonatal during the pregnancy period of the mother which might also affect health of the child (Lundgren *et al.* 2018).

4.5.3 Ethnic disparities in Dietary requirements for pregnant women

Current dietary plans for pregnant women contain vitamins, minerals and various fruits and vegetables. Cargo and Thomas (2018) Insufficient intake of the proper diet is associated with the low birth weight of child, along with potential chances of health diseases as mentioned in the cross-sectional study. On the other hand, Lundgren *et al.* (2018) argued that eating unhealthy foods and consumption of alcohol has no nutritional value, also affects the health of the child and smoking also causes complexity among the pregnant women in the UK.

4.5.4 Recommendation of dietary plan for women

It is recommended that consumption of DHA omega-3 fatty acid and EPA is beneficial for pregnant women in the UK as it helps to develop the nutritional value in the child. However, according to Zelalem *et al.* (2017) it is stated that guidelines are required to be followed by pregnant women in the UK and maintain a high quality of diet, which is supported by the UK government.

4.6 Conclusion

It is concluded that different designs have been selected by using authenticated journals from which the themes have been designed. Lack of proper vitamins and minerals leads to disease, which causes anaemia, rickets, and other diseases Pregnant mother of age 20 to 25 must have the proper dietary intake so that the birth weight of the child is proper. However, it is observed that based on race, caste, and gender people are differentiated and it has changed the dietary plan for high standards and low standard pregnant women.

Chapter 5: Findings and discussion

5.1 Introduction

In this chapter, it is observed that different data have been collected from the authenticated journal which helps to collect information on the dietary intake and its impact on the birth weight of the child. This chapter helps to provide a clear idea on the importance of maintaining a proper diet among pregnant women in the UK and the importance of consuming vitamins and antioxidants.

5.2 Findings

5.2.1 Mediterranean dietary pattern for dietary intake of women

It is observed that the Mediterranean diet includes all types of fruits, vegetables, nuts and low fat substances that increases the immunity of the mother and helps in gaining weight of the child. Tucci *et al.* (2021) argued that the mother might face obesity during the pregnancy phase due to eating excess food containing fats. The reason for recommending Mediterranean diet is that it increases immunity power of the child. Mediterranean diet helps to improve the condition of the child, which has a positive impact and it protects the mother from anxiety and depression. It is also stated that lack of vitamins B and D reduces the development of the skull in the foetus and leads to allergic diseases.

5.2.2 Importance of food availability for child growth and mother during pregnancy

It is observed that many pregnant women fail to consume adequate food during pregnancy due to financial conditions in the UK. It has been observed that 2488 infants died in the UK in 2018 due to lack of proper diet and availability of food. It has been observed that support to pregnant women from the government has reduced child mortality. Lack of food reduced the intake of proper vitamins and minerals that are essential for the development of the child and lack of this food reduced the birth weight below 2500 gram. On the other hand, Uday, and Högler (2018) stated excess eating of junk food leads to sickness of the mother and faces obesity during pregnancy.

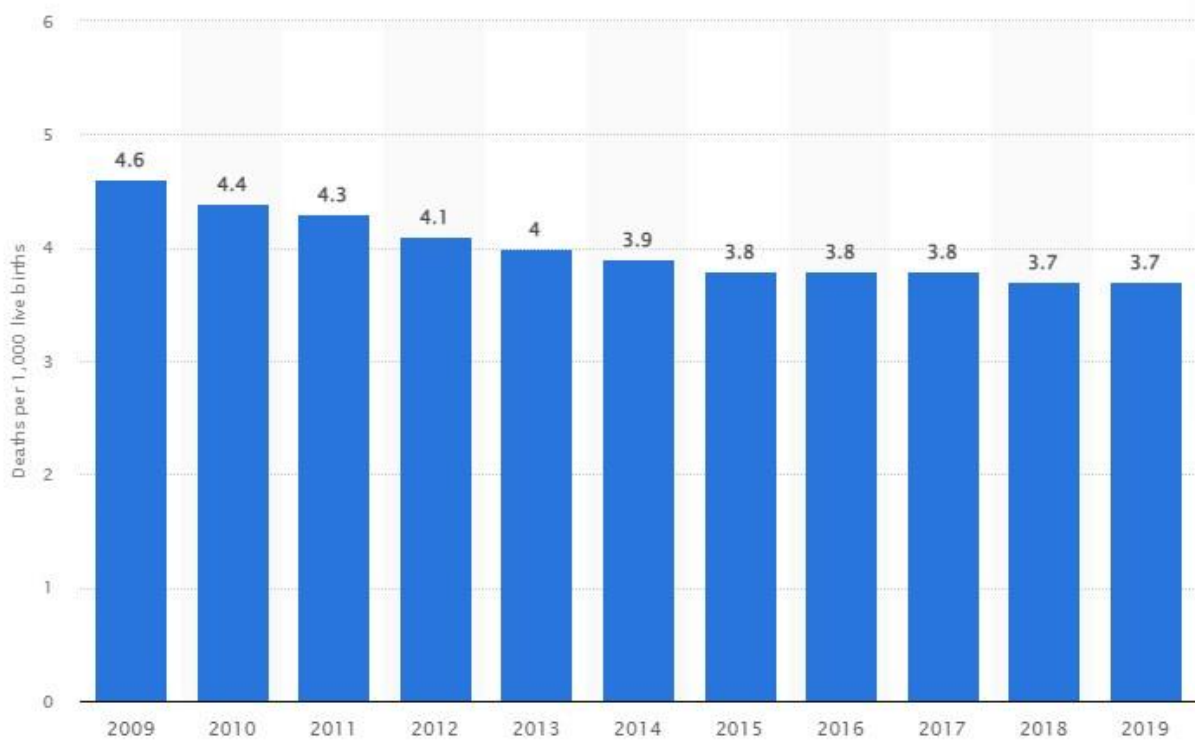


Figure 5.1: Neonatal death in the UK

(Sources: Statista, 2021)

5.2.3 Ethic disparity among the women and its impact on childbirth weight

It is observed that the birth weight of the child in financially backward families is more as compared to high-income families (O'Callaghan and Kiely, 2018). In addition to this, it is relevant to mention that the qualitative and quantitative research conducted by O'Callaghan and Kiely (2018) it was observed that backward class and poor pregnant women faces challenge to eat healthy foods which effect the health of neonatal during birth.

5.3 Discussion

5.3.1 Importance of Mediterranean Dietary plan among the pregnant women

As per the literature review it is observed that MD is beneficial for the development of the child and improves immunity. However, the diet plan contains nutritional food, which helps to improve the child birth weight and protects the infinite from any diseases. It is also suggested to get careful dietary plan along with exposure to sun as it lowers the vitamin D absorption and it might lead to rickets. Lack of dietary plan among the less educated pregnant women has a

negative impact on the child and lack of vitamin c leads to scurvy, which is skin diseases among the infants.

5.3.2 Recommendation to the pregnant women

It is suggested that consumption of excess food is injurious to the mother's health and affects the metabolism of the child. Hence, it is suggested to maintain a proper diet with appropriate intake of proteins, vitamins, calcium and all the essential micro and macronutrients. It is recommended that consumption of low fats is beneficial along with low intake of sugar that has negative impact on the child.

5.4 Conclusion

It can be concluded that MD is beneficial for the mother and the child that allows the pregnant mother to intake a nutrient- rich diet and keep the weight between 2.5kg-4.5 kg. It seems that due to lack of proper knowledge and ideas pregnant women fail to intake proper diet and smoking, drinking habits affects the growth, and development of the fetus however; there may be poor diet issues due to poor background of family.

Chapter 6: Conclusion and recommendation

6.1 Conclusion

It can be concluded that Systematic analysis has been done in the research where 4 journal articles has focused on the proper intake of the food and development of child birth weight. One article has focused on the disparities and its effect on the pregnant women and the child. Qualitative analysis has been done in this research study, which helped to develop themes in this research.

6.2. Linking with objectives

Linking with objective 1: To determine the impact of Mediterranean diet on the pregnant women in the UK

This objective has been met in the Systematic review analysis section 4.5.1 where it is stated that the Mediterranean diet contains beneficial nutrients that have a positive impact on the development of the child. In the finding section in 5.2.1, it is argued that MD might lead to asthma and eczema problem, which might affect the pregnant mother health

Linking with objective 2: To identify the importance of food availability on birth weight of child

This objective has been met in section 4.5.2 where it is shown that lack of food reduces the proper maintenance of diet and affects the mother's health, which has adverse effects on the birth weight of the child. However, in the finding section in 5.2.2 it was shown that 2488 infants in the UK died due to lack of availability of food.

Linking with objective 3: To analyse ethnic disparities in dietary plans in pregnant women have an impact on child

This objective has been met in section 4.5.3 and 5.2.3 where it is clearly shown that disparities have a negative impact on the health of the child. Disparities due to ethnic and racial causes might influence the intensive care of the new-born child.

Linking with objective 4: To recommended proper plan to maintain diet leading to healthy birth weight of child

This objective has been met in 5.3.2 where it has been stated that guidance from doctor is essential for the development of the child growth and improve the consumption of foods. It is also recommended to stop smoking and drinking habits before and during pregnancy phase.

6.3 Research limitation

The research has failed to explain the importance of providing adequate knowledge to pregnant women through teaching and reframing the proper intake of food. It is observed that various pregnant women financially backward face lack of proper consumption of food and no proper strategies have been mentioned.

6.4 Future scope

This study would provide a clear idea to the pregnant women and the families who faced neonatal loss due to lack of proper intake of diet. This research study provides a clear idea on the fact that healthy food consumption but in adequate amounts is beneficial for the child.

6.5. Recommendation

It is recommended that ***proper training of pregnant women*** is essential as it helps to improve their conception regarding diet. It is also important to take low stress and eat more fruits and vegetables including proteins and nuts are essential for child development. Excessive consumption must be reduced along with reducing the sugar intake.

Proper guidance from a doctor and nutritionist is important to understand which diet is important during the maternal phase. It is suggested to avoid drinking and smoking during this phase, walking, and stretching with a proper trainer helps to develop the child's growth.

References

- Edwards, M.E., Jepson, R.G. and McInnes, R.J., 2018. Breastfeeding initiation: An in-depth qualitative analysis of the perspectives of women and midwives using Social Cognitive Theory. *Midwifery*, 57, pp.8-17. Available at: <https://www.sciencedirect.com/science/article/pii/S0266613817300670> (Accessed on 29 November 2021)
- Khaled, K., Hundley, V., Almilaji, O., Koeppen, M. and Tsofliou, F., 2020. A priori and a posteriori dietary patterns in women of childbearing age in the UK. *Nutrients*, 12(10), p.2921. Available at: <https://www.mdpi.com/2072-6643/12/10/2921/pdf> [Accessed on 23 December]
- Lundgren, S.N., Madan, J.C., Emond, J.A., Morrison, H.G., Christensen, B.C., Karagas, M.R. and Hoen, A.G., 2018. Maternal diet during pregnancy is related with the infant stool microbiome in a delivery mode-dependent manner. *Microbiome*, 6(1), pp.1-11. Available at: <https://microbiomejournal.biomedcentral.com/articles/10.1186/s40168018-0490-8> [Accessed on 23 December]
- McNulty, H., Ward, M., Hoey, L., Hughes, C.F. and Pentieva, K., 2019. Addressing optimal folate and related B-vitamin status through the lifecycle: health impacts and challenges. *Proceedings of the Nutrition Society*, 78(3), pp.449-462. Available at: <https://www.cambridge.org/core/journals/proceedings-of-the-nutrition-society/article/addressing-optimal-folate-and-related-b-vitamin-status-through-the-lifecycle-health-impacts-and-challenges/45752E6EF3F86CAD3874471734C45DEE> (Accessed on 29 November 2021)
- Noyes, J., Booth, A., Flemming, K., Garside, R., Harden, A., Lewin, S., Pantoja, T., Hannes, K., Cargo, M. and Thomas, J., 2018. Cochrane Qualitative and Implementation Methods Group guidance series—paper 3: methods for assessing methodological limitations, data extraction and synthesis, and confidence in synthesized qualitative findings. *Journal of clinical epidemiology*, 97, pp.49-58. Available at: <https://www.sciencedirect.com/science/article/pii/S0895435617307199> (Accessed on 29 November 2021)
- O'Callaghan, K.M. and Kiely, M.E., 2018. Ethnic disparities in the dietary requirement for vitamin D during pregnancy: considerations for nutrition policy and research. *Proceedings of the Nutrition Society*, 77(2), pp.164-173. Available at:

<https://www.cambridge.org/core/services/aop-cambridgecore/content/view/35D1FB455715DF38133B24AB7B8852BB/S0029665117004116a>.

[pdf/div-class-title-ethnic-disparities-in-the-dietary-requirement-for-vitamin-d-duringpregnancy-considerations-for-nutrition-policy-and-research-div.pdf](#) [Accessed on 23 December]

Roberts, K., Cade, J., Dawson, J. and Holdsworth, M., 2018. Empirically derived dietary patterns in UK adults are associated with sociodemographic characteristics, lifestyle, and diet quality. *Nutrients*, 10(2), p.177. Available at: <https://bmjopen.bmj.com/content/8/4/e020810.abstract> [Accessed on 23 December]

Stephenson, J., Heslehurst, N., Hall, J., Schoenaker, D.A., Hutchinson, J., Cade, J.E., Poston, L., Barrett, G., Crozier, S.R., Barker, M. and Kumaran, K., 2018. Before the beginning: nutrition and lifestyle in the preconception period and its importance for future health. *The Lancet*, 391(10132), pp.1830-1841. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/pmc6075697/> (Accessed on 29 November 2021)

Tucci, M., Martini, D., Del Bo, C., Marino, M., Battezzati, A., Bertoli, S., Porrini, M. and Riso, P., 2021. Mediterranean dietary pattern developed based on the EAT-Lancet reference diet (EAT-IT): A nutritional evaluation. *Foods*, 10(3), p.558 Available at: <https://www.mdpi.com/2304-8158/10/3/558> [Accessed on 23 December]

Uday, S. and Höglér, W., 2018. Prevention of rickets and osteomalacia in the UK: political action overdue. *Archives of disease in childhood*, 103(9), pp.901-906. Available at: <https://adc.bmj.com/content/103/9/901.abstract> (Accessed on 29 November 2021)

Usuzaki, T., Shimoyama, M., Chiba, S., Mori, N. and Mugikura, S., 2020. A Method Expanding 2 by 2 Contingency Table by Obtaining Tendencies of Boolean Operators: Boolean Monte Carlo Method. *arXiv preprint arXiv:2002.04721*. Available at: <https://arxiv.org/pdf/2002.04721> (Accessed on 29 November 2021)

Zelalem, A., Endeshaw, M., Ayenew, M., Shiferaw, S. and Yirgu, R., 2017. Effect of nutrition education on pregnancy specific nutrition knowledge and healthy dietary practice among pregnant women in Addis Ababa. *Clinics in Mother and Child Health*, 14(3), p.265. Available at: https://www.researchgate.net/profile/MulualemEndeshaw/publication/319956738_Effect_of_Nutrition_Education_on_Pregnancy_Specific_Nutrition_Knowledge_and_Healthy_Dietary_Practice_among_Pregnant_Wom

[en in Addis Ababa/links/59c3ad97458515af3065efdc/Effect-of-Nutrition-Educationon-Pregnancy-Specific-Nutrition-Knowledge-and-Healthy-Dietary-Practice-amongPregnant-Women-in-Addis-Ababa.pdf](#) (Accessed on 29 Novemeber 2021)

Appendix 1: importance of diet

