

Impact of Lifestyle Intervention Programmes On Addressing Risk Factors Affecting Healthy Living: A Case Study of Edo State

By

***OSEMWENGIE, Kehinde Presley**

Department of Economics and Statistics, University of Benin, Benin, Edo State, Nigeria.

presley.osemwengie@uniben.edu; +2348038226071

&

ZUBAIR, Taofeek Bidemi

Department of Economics, Adeyemi Federal University of Education, Ondo State, Nigeria.

bidemizubair@gmail.com; +2347032985550

* Corresponding Author

Abstract

The study aimed to examine the impact of lifestyle intervention programmes on addressing risk factors affecting healthy living in Edo State, Nigeria. The research used a descriptive survey research design, collecting data from 220 medical professionals through questionnaires. The data was analyzed using mean, standard deviation, and Pearson Product Moment Correlation (PPMC). The findings showed a mixed picture of the effectiveness of the lifestyle intervention programmes. While there was a positive correlation between the programmes and raising awareness about healthy behaviors, encouraging healthy lifestyles, and promoting collaboration among healthcare providers, there was a perception of limited effectiveness in providing support and resources for lifestyle changes and reducing the prevalence of risk factors. Based on the results, the study recommended enhancing support and resources for individuals to make positive lifestyle changes, tailoring interventions to specific risk factors and population groups, fostering effective collaboration among healthcare providers, conducting long-term impact assessments, and considering population-wide strategies to address risk factors. In conclusion, the study highlighted the importance of lifestyle intervention programmes in promoting healthy behaviors and raising awareness about their significance. While there may be room for improvement in certain areas, the positive impact of these interventions on addressing risk factors for health in Edo State was evident.

Keywords: Lifestyle intervention programmes, risk factors, health, Edo State, healthy behaviors.

1. Introduction

The term "lifestyle" refers to a person's entire way of life. The lifestyle of a person comprises his or her eating habits, drinking habits, smoking habits, amount of physical activity or inactivity, including unprotected sexual behavior, and drug usage. The indices described above are referred to as lifestyle factors. Degenerative and chronic diseases that plague people today are caused by the effects of these lifestyle variables. Hypertension, diabetes, cancer, stroke, liver disease, and the development of HIV/AIDS are examples of such degenerative diseases (Osemwengie, 2020). A person's lifestyle is a pattern of behavioral decisions they make based on their socioeconomic condition and how easy they may choose one option over another. The "behaviour of choice" that influences one's health state is their way of living.

A healthy mind is promoted by having good strength and endurance, which is a component of physical fitness as a lifestyle choice. The conventional definition of fitness was the capacity to perform the day's responsibilities without becoming unduly fatigued. The concept, however, became inadequate when leisure time expanded due to automation and changes in lifestyles brought on by the industrial revolution. Physical activity has an impact on blood pressure, cholesterol, blood lipid levels, blood clotting factors, and blood vessel strength (Libretext, 2023). It enhances the body's utilization of insulin. Physical activity is extremely beneficial for those who are at risk for diabetes, especially Type 2 (insulin resistant) individuals since it promotes improved insulin utilisation and safeguards the heart. People who get diabetes are more likely to get cardiovascular disease. In a study, the association between physical activity and metabolic risk factors such as insulin resistance, inflammation, and dyslipidemia was examined in a sample of almost ten thousand adults from the 3rd National Health and Nutrition Examination Survey. The study controlled for common confounders when examining the relationship between CVD mortality and moderate to vigorous physical exercise. The findings showed that exercise has a protective effect against CVD mortality independent of conventional metabolic risk variables.

For the purpose of promoting good health, maintaining a healthy weight, losing weight, and preventing hypokinetic diseases in the United States, several organizations advise that 30 minutes of moderate physical activity be performed most days of the week.

Walking, jogging, running, gardening, yard work, and swimming are examples of these level of exercise (Vetter, 2023). The majority of Nigerian employees have pot bellies and muscular hips and buttocks as a result of their sedentary work habits. The question is, to what extent has lifestyle intervention programmes help to address some of the risk factors for health in Edo State? Thus, this study intends to examine the impact of lifestyle intervention programmes in addressing some of the risk factors affecting healthy living in Edo State.

The paper is divided into five sections. Section captures the introduction. Section 2 provides a review of relevant literature while section 3 presents the methodology adopted. Section 4 discusses the results and analysis, and section 5 concludes the paper.

2. Literature Review

In order to change attitudes and raise awareness of the advantages of quitting as well as the risks of tobacco use, population-based approaches to stopping smoking that make use of mass media campaigns are crucial, says Durkin et al. (2022). However, most people ignore these tactics, which results in missed opportunities for smoke control. According to Robert et al. (2022), substantial media dissemination of study data revealing such effects has been particularly effective in situations where there is minimal awareness of the harmful health effects of tobacco use, as is commonly the case in emerging economies.

The initial answers to the need for tobacco control were advertising prohibitions. The impacts are challenging to quantify since they take time to fully manifest and may last for many years. To significantly increase the health and economic benefits of curbing the smoking pandemic, a full ban on tobacco advertising must be adopted (Bardach, 2021). According to the income levels of various nations, levels of physical inactivity tend to rise, and in 2016 it was projected that the levels in high-income nations were more than twice as high as levels in low-income nations (Katzmarzyk, *et al.*, 2022). And the situation is worse in Africa, especially Nigeria given the low level of education and awareness. Though they have been demonstrated to be more expensive than population-wide methods, *brief interventions* within the health system have also been shown to be cost-effective (Whitman et al., 2022).

By promoting walking through travel- and transportation-related activities, it would be able to increase the number of walking excursions (Juliane et al., 2018). Regarding initiatives to promote cycling, which typically entail altering the environment

in which people travel (by including bike lanes, off-street routes, and traffic-calming measures, for instance), the data are ambiguous. Despite this, there is strong evidence that a well-connected infrastructure network may promote cycling. For instance, a research conducted in the Netherlands found that increasing the number of cycle routes led to a 3% rise in the percentage of trips taken by bicycle. Cycling reduces numerous severe and chronic diseases, as well as early death, according to a study by Rosanne, *et al.* published in 2022. It makes life healthier and more enjoyable. These advantageous health outcomes result in lower social security costs, improved labor productivity, and decreased absenteeism from work. The Benelux-NRW region has relatively high labor productivity, therefore cycling's productivity increases have a significant economic impact. Cycling has such significant benefits for one's health that they more than offset all associated expenses, including those for infrastructure.

The Beliefs, Attitude, Subjective Norms, Enabling Factors (BASNEF) model has been adapted by Villarino et al. (2021) to analyze the effects of a lifestyle intervention program on non-adherent persons with hypertension who had raised blood pressure (BP). The author presents findings from a quantitative quasi-experimental study including 50 non-adherent patients in Cebu, Philippines, who were diagnosed with essential hypertension. Within-subjects methodology with repeated measures was employed in this study. The updated BASNEF model was used to deliver five training sessions to the study participants. An adhesion tool served as the evaluation's foundation. Participants' relevant profiles and histories are gathered in the first phase, and their systolic, diastolic, heart rate, and adherence scores are gathered in the last phase. The phase 1 mean systolic readings (146.50, SD 19.59) and phase 4 mean systolic readings (134.92, SD 15.24) show a significant difference, according to the authors. They also assert that the microgroup sessions of the BASNEF model's session III or phase IV behavioral intention-based lifestyle intervention has a positive effect on blood pressure readings among study participants. The authors claim that the BASNEF model approach is a useful BP management tactic.

In order to manage NCDs among Arab adults, Tariq, *et al.* (2022) look into the efficacy of nutritional interventions focusing on food and exercise. The authors conducted a thorough examination of the literature, looking for studies published between December 1, 2012, and December 31, 2021, utilizing a variety of database platforms, including Cochrane Reviews, Scopus, and PubMed. This study comprised 15 recent research articles from several Arab nations that addressed NCDs, namely diabetes and obesity. The majority of research found that tailored diet and exercise goals and structured

lifestyle treatments with behavioral therapy techniques improved some health outcomes. Longer-term therapies with follow-ups were found to significantly enhance health outcomes. The authors claim that a mix of in-person and online sessions proved to be most successful. In order to identify barriers to physical activity for a culturally appropriate lifestyle intervention, the authors did additional study to evaluate therapies for the long-term maintenance of health results.

In order to determine the efficacy of interventions for non-communicable diseases (NCDs) prevention that are provided through mobile technology, Palmer et al. (2018) did a systematic review. Between January 1990 and January 2016, we looked for randomised controlled trials (RCTs) of mobile-based NCD prevention strategies in MEDLINE, EMBASE, Global Health, and CINAHL. Data was gathered by two authors. The results of alcohol reduction treatments, according to the authors, were inconclusive. The researchers came to the conclusion that interventions concentrating on diet, exercise, and quitting smoking need to be improved in order to reduce morbidity and mortality in populations with pre-existing coronary heart disease.

Van der Heiden et al. (2022) examined general practitioners' (GPs) experiences and attitudes on the implementation of integrated lifestyle interventions (CLIs) in order to identify facilitators and barriers to their effective use in primary care. The authors employ semi-structured interviews. In many primary care settings, general practitioners were questioned between February and April 2019. Snowballing led to the targeted recruitment of fifteen medical doctors for semi-structured interviews. According to the study's findings, general practitioners' experiences with lifestyle support ranged from referring patients to other healthcare professionals to actively taking part in their own lifestyle help. All general practitioners, according to the authors, understood the value of lifestyle interventions, but their familiarity with and experience in offering combined lifestyle interventions (CLIs) varied.

Kris-Etherton et al. (2021), a research suggestion from the American heart association, modeled strategies for encouraging a healthy lifestyle in rehabilitative settings. The 5A Model, which stands for "assess, advise, agree, assist, and arrange," was developed to provide clinical counseling with a framework that appropriately addresses the requirements of clinical settings. For doctors and other healthcare workers, the writers of this science guidance outline strategies for providing patients with cardiovascular disease risk at all levels with effective lifestyle-related behavior change counseling at every visit, based on the 5A Model. Along with discussing the use of medical technology

by doctors in quick patient-centered counseling, the authors also discuss the essential importance of psychological health and wellness in counseling for lifestyle-related behavior modification. According to the authors, routine clinician visits that pay more attention to healthy lifestyle choices will help to advance cardiovascular health.

For the purpose of examining the profiles of long-term nonsmokers, Sohlberg and Bergmark (2020) perform baseline, follow-up, and descriptive analyses in addition to a second two-step cluster analysis. According to the authors, the majority of people did not significantly alter their lifestyles, but of those who did, the majority adopted a healthier lifestyle and/or increased their levels of physical activity, and long-term advancements in this direction appear to promote a longer lasting life without smoking. The writers advise making lifestyle adjustments in conjunction with giving up smoking. The author got to the conclusion that people who want to stop smoking should be encouraged to exercise more.

3. Methodology

Survey research design was adopted in the study whereby questionnaires were used to collect information from the respondents involved in the study. Two hundred and twenty (220) Medical Doctors, Pharmacists, Nurses, Dieticians, Clinical Psychologists, Dentists and Others were randomly selected from the healthcare facilities in four (4) Local Government Areas in Edo State, Nigeria, namely: Oredo, Egor, Ikpoba-Okha and Ovia North East. These local government were selected because they are one of the oldest, largest and highly populated local government in the state. It is our believe that the research findings would largely to an extent capture the lifestyle behaviour and pattern in other local governments and states in Nigeria.

A sample size of 220 was determined using Yaro Yamani's statistical formular. 220 questionnaires were administered and returned. The items in the research instrument were validated by experts in the field and reliability test was conducted using a pilot test of thirty (30) healthcare practitioners that were not part of the study sample using Cronbach's alpha method. A reliability coefficient of 0.85 was obtained from the research instrument which was considered satisfactory and relevant to the study objectives. The data collected from the respondents were analyzed through the use of mean, standard deviation and Pearson Product Moment Correlation (PPMC). Purposive or judgmental sampling technique was adopted because of the specific characteristics of the lifestyle of the respondents that also need specific intervention.

4.1 Presentation of Data and Interpretation of Results

This section contains the analysis and presentation of data. It shows the empirical analysis of the impact of lifestyle intervention programmes in addressing some of the risk factors for health in Edo State

4.2 Discussion of Findings

Research Question: To what extent has lifestyle intervention programmes helped to address some of the risk factors for health in Edo State?

Table 4.1: Mean and Standard Deviation of Extent Lifestyle Intervention Programmes have helped to address some of the Risk Factors in Edo State Health Sector

S/N	Items	Mean	SD	Decision
1	Lifestyle intervention programmes in Edo State have effectively addressed risk factors in Edo State health sector.	2.49	0.812	Disagreed
2	Lifestyle intervention programmes have raised awareness about the importance of healthy behaviors in Edo State.	2.79	0.765	Agreed
3	Lifestyle intervention programmes have encouraged individuals to adopt healthy lifestyle in Edo State.	2.70	0.735	Agreed
4	Lifestyle intervention programmes have provided adequate support and resources for individuals to make positive lifestyle changes in Edo State.	2.45	0.840	Disagreed
5	Lifestyle intervention programmes have effectively reduced the prevalence of risk factors in Edo State health sector.	2.49	0.875	Disagreed
6	Lifestyle intervention programmes have allowed for effective collaboration among healthcare providers and professionals in Edo State.	2.70	0.870	Agreed

Key: SD = Standard Deviation

Decision rule: 0.00-2.49- Disagreed; 2.50 - 5.00- Agreed

Source: Field Work (2023)

Table 4.1 above shows that the lifestyle intervention programmes have helped to address some of the risk factors for health in Edo State. For the first question item under

in this category, the mean score of 2.49 with a standard deviation of 0.812, resulted in a decision of "Disagreed." This revealed that the respondents generally did not believe that lifestyle intervention programmes have effectively addressed risk factors in the Edo State health sector. The mean score 2.79 with a standard deviation of 0.765 for the second item, led to a decision of "Agreed", meaning that respondents agreed that lifestyle intervention programmes raised awareness about the importance of healthy behaviors in Edo State. The mean score 2.70 with a standard deviation of 0.735, resulting in a decision of "Agreed" for the third question implies that respondents agreed that lifestyle intervention programmes encouraged individuals to adopt healthy lifestyles in Edo State. The mean score of 2.45 with a standard deviation of 0.840, led to a decision of "Disagreed" for the fourth items, and this suggests that respondents did not believe that lifestyle intervention programmes provided adequate support and resources for individuals to make positive lifestyle changes in Edo State. Also, the mean score of 2.49 with a standard deviation of 0.875, resulted in a decision of "Disagreed" for the fifth question item, implying that respondents generally did not believe that lifestyle intervention programmes effectively reduced the prevalence of risk factors in the Edo State health sector. Finally, the mean score of 2.70 with a standard deviation of 0.870, leading to a decision of "Agreed." This shows that respondents agreed that lifestyle intervention programmes allowed for effective collaboration among healthcare providers and professionals in Edo State.

Research Hypothesis: Lifestyle intervention programmes has not helped to address any of the risk factors for health in Edo State.

Table 4.2: PPMC of Lifestyle Intervention Programmes and the Risk Factors for Health in Edo State

S/N	Items	Mean	SD	R	Sig. (2 tailed)	Decision
1.	Raising awareness about the importance of healthy behaviors	2.79	0.765	0.548*	0.000	Positive, moderate and significant correlation
2.	Adoption of healthy lifestyle by individuals	2.70	0.735	0.646*	0.000	Positive, high, and significant correlation
3.	Provision of support and resources for individuals for positive lifestyle changes	2.45	0.840	0.545*	0.000	Positive, moderate and significant correlation

4.	Allowance for effective collaboration among healthcare providers and professionals	2.70	0.870	0.507*	0.000	Positive, moderate and significant correlation
5.	Reduction in the prevalence of risk factors in health sector	2.49	0.875	0.512*	0.000	Positive, moderate and significant correlation
6.	Effectively addressed risk factors in Edo State health sector	2.49	0.812	0.547*	0.000	Positive, moderate and significant correlation

Key: SD = Standard Deviation; r = correlation coefficient; * = *At the 0.05 threshold of significance, the relationship is significant.*

Source: Field Work (2023)

The table 4.2 above shows the Pearson Product Moment Correlation (PPMC) of Lifestyle Intervention Programmes and the Risk Factors for Health in Edo State. The table revealed the correlation between lifestyle intervention programmes and raising awareness about the importance of healthy behaviors in Edo State where the mean value of 2.79 shows the average score for the variable "raising awareness about the importance of healthy behaviors." The standard deviation of 0.765 measures the variability or spread of the responses around the mean. A smaller standard deviation shows that the data points are closer to the mean, indicating more agreement among the participants regarding the impact of lifestyle intervention programmes. The correlation coefficient of 0.548* demonstrates the direction and intensity of the link between lifestyle intervention Programmes and promoting healthy habits. The positive sign (+) implies that as the participation in lifestyle intervention programmes increases, so does the awareness about the importance of healthy behaviors. The significance level (p-value) of 0.000 shows that the observed correlation between lifestyle interventions programmes and raising awareness of healthy behaviors is statistically significant. In other words, this result is unlikely to be due to chance alone. Therefore, based on these statistics and the decision criteria provided (Positive, moderate, and significant correlation), the findings indicate that lifestyle intervention programmes have a positive, moderate, and significant impact on raising awareness about the importance of healthy behaviors in Edo State.

Table 4.2 also revealed the correlation between lifestyle intervention programmes and Adoption of healthy lifestyle by individuals where the mean value of 2.70 represents the average score of individuals' willingness to adopt a healthy lifestyle after participating

in the lifestyle intervention programmes. The standard deviation of 0.735 shows the degree of variability in the responses of participants. A lower standard deviation shows that the responses are more closely clustered around the mean, which might indicate a consistent impact of the intervention. The correlation coefficient of 0.646* shows a positive and high correlation between the lifestyle intervention programmes and the adoption of a healthy lifestyle. A correlation coefficient closer to 1 shows a stronger relationship. The link revealed is statistically significant with a level of 0.000 significance. Therefore, it is doubtful that the correlation was discovered by accident. Overall, the findings revealed that the lifestyle intervention programmes in Edo State have been effective in encouraging individuals to adopt a healthy lifestyle. The positive, high, and statistically significant correlation implies a strong relationship between the intervention and the outcome, indicating that the intervention has had a noticeable impact on promoting healthy lifestyles among the participants.

The table (4.2) shows the correlation between lifestyle intervention programmes and Provision of support and resources for individuals for positive lifestyle changes where the mean value of 2.45 revealed that, on average, participants in the lifestyle intervention programmes have shown some level of positive response to the support and resources provided. The standard deviation of 0.840 shows the variability in the responses among the participants. A higher standard deviation means that the responses were more spread out, while a lower value shows that the responses were closer to the mean. The correlation coefficient of 0.545* implies a positive correlation between the lifestyle intervention support and the positive lifestyle changes made by individuals. A value of 0.545 shows a moderate positive relationship. The 0.000 significance level demonstrates that the correlation between lifestyle interventions support and positive lifestyle changes is statistically significant. A p-value of 0.000 means that the probability of observing such a strong correlation by chance is very low. Based on the findings, we can conclude that there is a statistically significant and moderate positive correlation (0.545) between the lifestyle intervention programmes support and resources and the positive lifestyle changes made by individuals in Edo State. This shows that the intervention programmes have been effective in providing adequate support and resources to help individuals make positive lifestyle changes. The findings indicate that the lifestyle intervention programmes in Edo State have had a positive impact on individuals, providing them with the necessary support and resources to make meaningful lifestyle changes.

The table (4.2) shows the correlation between lifestyle intervention programmes and Allowance for effective collaboration among healthcare providers and professionals

where the mean value of 2.70 shows that the respondents, on average, agree with the statement "Lifestyle intervention programmes have allowed for effective collaboration among healthcare providers and professionals in Edo State." The standard deviation of 0.870 shows the dispersion of the responses around the mean. A higher standard deviation shows that the respondents' opinions vary widely, while a lower standard deviation shows more agreement among the respondents. The correlation coefficient of 0.507* shows a moderate positive correlation between the variables being studied. In this case, the correlation is between the implementation of lifestyle intervention programmes and effective collaboration among healthcare providers and professionals. The significance level of 0.000 shows that the correlation observed is statistically significant. The claim that there is a real connection between lifestyle intervention Programmes and efficient collaboration among healthcare providers and professionals in Edo State is supported by a significance level of 0.000, which indicates that the likelihood of discovering such a correlation by chance is extremely low. Overall, the results showed a moderately strong positive link between the efficacy of lifestyle intervention Programmes and cooperation between healthcare professionals and professionals in Edo State. This indicates that the use of lifestyle intervention Programmes has helped to promote cooperation among medical specialists in the area.

The result from the table further revealed the correlation between lifestyle intervention programmes and reduction in the prevalence of risk factors in health sector where the mean value of 2.49 shows the average effect size of the lifestyle intervention programmes on reducing risk factors. The standard deviation of 0.875 shows the variability in the data around the mean. A smaller standard deviation shows that the data points are closer to the mean, indicating more consistency in the results. The positive correlation coefficient of 0.512* shows that as the implementation of lifestyle intervention programmes increases, the prevalence of risk factors in the Edo State health sector tends to decrease. This is a positive and desirable outcome as it shows that these programmes are effective in addressing risk factors. With a correlation coefficient of 0.512*, the strength of the relationship between lifestyle intervention programmes and the reduction of risk factors can be considered moderate. While it is not a weak correlation, it is not extremely strong either. Nevertheless, a moderate correlation is still meaningful and relevant for policymakers and healthcare professionals to consider when designing intervention strategies. The significant value of 0.000 shows that the observed correlation between lifestyle interventions programmes and risk factor reduction is statistically significant. This shows that the relationship between the two variables

(lifestyle intervention programmes and reduction in the prevalence of risk factors in health sector) is not likely to be a result of random chance but is a real and meaningful association. Overall, the findings revealed that lifestyle intervention programmes have effectively reduced the prevalence of risk factors in Edo State's health sector. The positive and significant correlation provides evidence that these programmes are associated with a decrease in risk factors. However, since the correlation is considered moderate, there might be other factors or interventions that could further enhance the effectiveness of the programmes.

Also, Table 4.2 (R column) shows the correlation between lifestyle intervention programmes and effectively addressed risk factors in Edo State health sector where the mean of 2.49 shows the average score of the participants in the lifestyle intervention programmes effectiveness in addressing risk factors in Edo State's health sector. The standard deviation of 0.812 measures the variability or spread of the scores around the mean. A higher standard deviation implies more dispersion in the data points. The correlation coefficient of 0.547* shows a positive correlation between the lifestyle intervention programmes and the effective addressing of risk factors in the Edo State health sector. The connection revealed is statistically significant, as evidenced by the significance value (Sig. 2-tailed) of 0.000. This suggests that it is improbable that the association we have discovered is the result of pure chance. The findings of the study revealed that lifestyle intervention programmes implemented in Edo State have been effective in addressing risk factors within the health sector. This is evidenced by a moderate positive correlation ($r = 0.547^*$) between the intervention programmes and the reduction of risk factors. The statistically significant correlation (Sig. 2-tailed = 0.000) implies that the observed relationship between the lifestyle interventions and risk factor reduction is not due to chance. The mean score of 2.49 shows a favorable overall perception of the effectiveness of the lifestyle intervention programmes among participants. Moreover, the moderate positive correlation signifies that as the interventions are implemented and adhered to, there is a noticeable improvement in addressing risk factors in the health sector. These results demonstrate the significance of lifestyle intervention programmes in contributing positively to the health outcomes in Edo State.

Based on the findings above, the researcher therefore reject hypothesis one (1) which states that the lifestyle intervention programmes have not helped to address any of the risk factors for health in Edo State. Hence, the researcher concludes that the lifestyle

International Journal of Marketing and Management Sciences Vol.4, No.2 August, 2024 ISSN 2536-605X
intervention programmes have helped to address some of the risk factors for health in Edo State.

The findings also show a mixed picture of the effectiveness of lifestyle intervention programmes in addressing risk factors in the Edo State health sector. Previous studies such as those of Whitman, *et al.*, (2022), Babor, *et al.*, (2022) and Lewsey, *et al.*, (2019) have shown that although intervention programmes within the health system have the potential to be cost-effective, population-wide solutions are by far the more cost-effective option. On one hand, there are perceptions of limited effectiveness in terms of risk factor reduction and provision of resources, just as stated by Palmer, *et al.*, (2018) that the effects of alcohol reduction interventions were effects of alcohol reduction interventions were inconclusive in terms of risk reduction. On the other hand, the programmes appear to be successful in raising awareness, encouraging healthy behaviors, and fostering collaboration among healthcare providers. This was buttressed by Sohlberg and Bergmark (2020), who stated that the majority of people did not change their lifestyles in any significant way, but of those who did, the majority embraced a healthier lifestyle and/or improved their physical activity levels, and long-term improvements in this direction appear to promote a longer enduring life without smoking. The finding was further buttressed by Kris-Etherton, *et al.* (2021), who state that greater attention to healthy lifestyle behaviors during routine clinician visits will contribute to promoting cardiovascular health.

5. Conclusion and Recommendations

Contrary to the research hypothesis that stated lifestyle intervention programmes have not helped to address any risk factors for health in Edo State, the study's findings suggest that these programmes have indeed contributed to addressing some risk factors. The positive correlations observed in various aspects, particularly in raising awareness and promoting healthy behaviors, demonstrate the beneficial impact of the intervention programmes.

Overall, the findings emphasize the importance of lifestyle intervention programmes in promoting healthy behaviors and raising awareness about their significance. While there may be room for improvement in certain areas, the study underscores the positive impact these interventions can have on addressing risk factors for health in Edo State.

5.1 Summary

The study examined the extent to which lifestyle intervention programmes have addressed risk factors for health in Edo State. Data was collected through a survey, and the findings were analyzed and discussed. The mean scores and standard deviations for various aspects of the intervention were presented, along with the decisions based on those scores. Additionally, the Pearson Product Moment Correlation (PPMC) was used to determine the relationships between lifestyle intervention programmes and different health factors. The results revealed a mixed picture of the effectiveness of lifestyle intervention programmes. While some aspects, such as raising awareness about healthy behaviors and encouraging individuals to adopt healthy lifestyles, showed positive correlations, other aspects like providing support and resources for lifestyle changes and reducing the prevalence of risk factors were perceived to be less effective.

Based on the findings of this study, the following recommendations were made:

- i. Enhance Support and Resources: Government and health sector authorities should make effort to improve the provision of support and resources for individuals to make positive lifestyle changes. This could involve strengthening the resources available for participants to adopt and sustain healthier behaviors.
- ii. Edo State Government and health sector authorities should ensure targeted interventions: Given the mixed results, it might be valuable to assess and refine the strategies employed in reducing the prevalence of risk factors. Tailoring interventions to specific risk factors and population groups could potentially yield more effective outcomes.
- iii. Edo State Government and health sector authorities should ensure collaboration: Building on the positive correlation between lifestyle intervention programmes and collaboration among healthcare providers, efforts should continue to foster effective collaboration. This can improve the coordination of interventions and maximize their impact.
- iv. Edo State Government and health sector authorities should ensure long-term impact assessment: Conducting follow-up assessments to track the long-term impact of lifestyle intervention programmes on health outcomes would provide valuable insights into their sustainability and effectiveness over time.
- v. Edo State Government and health sector authorities should ensure population-wide strategies: Consideration should be given to implementing broader population-wide strategies alongside targeted interventions. This could help

International Journal of Marketing and Management Sciences Vol.4, No.2 August, 2024 ISSN 2536-605X
address risk factors at a larger scale and potentially lead to more significant improvements in public health.

- vi. Individual should also adopt a healthy lifestyle by eating right and engaging more on physical activities to reduce the risk factors and improvement in their health.

References

Babor, T.F., Casswell, S., Graham, K., Huckle, T., Livingston, M., Österberg, E., Rehm, J.,... (2022). Drinking and driving: prevention and countermeasures. *Alcohol: No Ordinary Commodity: Research and public policy* (3rd Edition). <https://doi.org/10.1093/oso/9780192844484.003.0011>.

Bardach, A., Alcaraz, A., Roberti, J., Ciapponi, A., Augustovski, F., & Pichon-Riviere, A. (2021). Optimizing Tobacco Advertising Bans in Seven Latin American Countries: Microsimulation Modeling of Health and Financial Impact to Inform Evidence-Based Policy. *International journal of environmental research and public health*, 18(10), 5078. <https://doi.org/10.3390/ijerph18105078>.

Durkin S.J., Brennan E., & Wakefield. M.A. (2022). Optimising tobacco control campaigns within a changing media landscape and among priority populations. *Tobacco Control*.31:284–290.

Juliane, S., Wolfgang J. B., & Reinhard, H. (2018). The effectiveness of an intervention to promote active travel modes in early adolescence. *Transportation Research Part F: Traffic Psychology and Behaviour*. 55;389-402.

Katzmarzyk, P.T., Friedenreich, C., & Shiroma E.J. (2022). Physical inactivity and non-communicable disease burden in low-income, middle-income and high-income countries. *Br J Sports Med*; 56:101–106.

Kris-Etherton, P.M., Petersen, K.S., Després, J., Anderson, C.A., Deedwania, P., Furie, K.L., Lear, S., Lichtenstein, A.H., Lobelo, F.,... (2021). Strategies for Promotion of a Healthy Lifestyle in Clinical Settings: Pillars of Ideal Cardiovascular Health: A Science Advisory from the American Heart Association. Retrieved on 3rd March, 2024 from: <https://doi.org/10.1161/CIR.0000000000001018>.

Lewsey, J., Haghpanahan, H., Mackay, D., McIntosh, E., Pell, J., & Jones, A. (2019). Impact of legislation to reduce the drink-drive limit on road traffic accidents and alcohol consumption in Scotland: a natural experiment study. *Public Health Research*. 7(12). Retrieved on 3rd March, 2024 from: <https://doi.org/10.3310/phr07120>.

Libretext, (2023). Introduction to Nutrition and Physical Fitness [serial online]. Available: URL <https://med.libretexts.org/@go/page/69599>. Accessed 24th March, 2024.

Osemwengie, P.K. (2020). Do Socio-Economic Factors Contribute to Maternal Mortality in sub-Saharan Africa? Evidence from MDG Era and PMG Approach to Panel Data Analysis. *Acta Universitatis Danubius. OEconomica*, 16(6): 283-297.

Palmer, M., Sutherland, J., Barnard, S., Wynne, A., Rezel, E., Doel, A., Grigsby-Duffy, L., Edwards, S., Russell, S., Hotopf, E., Perel, P., & Free, C. (2018). The effectiveness of smoking cessation, physical activity/diet and alcohol reduction interventions delivered by mobile phones for the prevention of non-communicable diseases: A systematic review of randomised controlled trials. *PloS one*, 13(1), e0189801. <https://doi.org/10.1371/journal.pone.0189801>.

Robert H., Steven, B., Sherry E., Veronica M. E., Michelle J.,... (2022). The Effects of Tobacco Coverage in the Public Communication Environment on Young People's Decisions to Smoke Combustible Cigarettes. *72(2)*: 187–213.

Rosanne, V., & Bruno V.Z. (2022). A comparative cost-benefit analysis of cycling within the Benelux and North Rhine-Westphalia. *Transport & Mobility Leuven*. <https://www.benelux.int/wp>.

Sohlberg T., & Bergmark K.H.,(2020). Lifestyle and Long-Term Smoking Cessation. *Tobacco Use Insights*;13. <https://doi.org/10.1177/1179173X20963062>.

Tariq, M. N. M., Stojanovska, L., Dhaheri, A. S. A., Cheikh Ismail, L., Apostolopoulos, V., & Ali, H. I. (2022). Lifestyle Interventions for Prevention and Management of Diet-Linked Non-Communicable Diseases among Adults in Arab Countries. *Healthcare (Basel, Switzerland)*, 11(1), 45. <https://doi.org/10.3390/healthcare11010045>.

van der Heiden, W., Lacroix, J., Moll van Charante, E. P., & Beune, E. (2022). GPs' views on the implementation of combined lifestyle interventions in primary care in the Netherlands: a qualitative study. *BMJ open*, 12(2), e056451. <https://doi.org/10.1136/bmjopen-2021-056451>.

Vetter, C. (2023). Examples of physical activities for different fitness levels. *Physical Activity*. <https://zoe.com/learn/physical-activity-examples>. Accessed 6th March, 2024.

Villarino, R. T., Arcay, C. A., Temblor, M. C., Villarino, M. L., Bagsit, R., Ocampo, L., & Bernard, P. (2021). The Effects of Lifestyle Intervention Using the Modified Beliefs, Attitude, Subjective Norms, Enabling Factors Model in Hypertension Management: Quasi-Experimental Study. *JMIR cardio*, 5(2), e20297. <https://doi.org/10.2196/20297>.

Whitman, A., Lew, N.D., Chappel, A., Aysola, V., Zuckerman, R., & Sommers, B.D. (2022). Addressing Social Determinants of Health: Examples of Successful Evidence-Based Strategies and Current Federal Efforts. Assistant Secretary for Planning and Evaluation (ASPE). Retrieved on 3rd March, 2024 from: <https://aspe.hhs.gov/sites/default/files/documents/e2b650cd64cf84aae8ff0fae7474af82/SDOH-Evidence-Review.pdf>.