



Barriers to Adopting Healthy Eating Practices Among Roadside Automotive Repair Technicians in Takoradi, Ghana

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ABSTRACT

Roadside automotive repair technicians, commonly known as "wayside mechanics," often operate in environments characterized by irregular work schedules, limited access to healthy food options, and physically demanding labor. These conditions can contribute to the adoption of unhealthy dietary habits, increasing the risk of chronic diseases and impacting overall well-being and job performance. This study aimed to identify the factors influencing food choices and examine the barriers to adopting healthy eating practices among wayside mechanics in Takoradi, Ghana, through the lens of the Social Cognitive Theory. A quantitative approach utilizing a descriptive survey design was employed, with data collected from 120 randomly selected roadside mechanics. The findings revealed that convenience, time constraints, availability, accessibility, and personal preferences were the most influential factors shaping food choices. Significant barriers included busy work schedules leading to meal skipping, limited availability of healthy options, personal preferences, cultural norms, and food safety concerns. Environmental factors, such as the demanding work environment and lack of access to nutritious food options, interacted with personal factors like nutritional knowledge and self-efficacy to influence dietary behaviors. The study highlights the need for targeted interventions addressing these barriers through a multifaceted approach involving employers, policymakers, and public health professionals. Strategies such as flexible meal break policies, improving access to healthy food options, and incorporating culturally relevant education programs can empower roadside mechanics to make healthier dietary choices, ultimately improving their overall health and productivity.

Keywords: Roadside mechanics, Healthy eating, Occupational health, Barriers, Social Cognitive Theory

Introduction

The prevalence of unhealthy dietary habits and poor nutritional practices among certain occupational groups has garnered increasing attention in recent years. One such group that has been identified as potentially vulnerable to suboptimal nutritional intake is roadside automotive repair technicians, colloquially known as "wayside mechanics." This segment of the workforce often operates in environments characterized by long and irregular work hours, limited access to healthy food options, and a demanding physical labor component, all of which can contribute to the adoption of unhealthy eating patterns.

Roadside automotive repair technicians, commonly referred to as "wayside mechanics," play a crucial role in keeping vehicles and equipment operational. Their work involves repairing and maintaining cars, trucks, and other machinery, often under demanding conditions. However, the nature of their occupation presents unique challenges that can hinder their ability to make informed and healthful decisions regarding their dietary choices (Enander et al., 2022). This study draws upon the Social Cognitive Theory (SCT) proposed by Bandura (1986) as the theoretical framework to understand the factors influencing dietary behaviors among roadside mechanics. SCT posits that an individual's behavior is influenced by personal factors, environmental factors, and behavioral factors, all of which interact in a reciprocal manner.

Personal factors, such as knowledge, attitudes, beliefs, and self-efficacy, can shape an individual's motivation and ability to adopt healthy eating practices. Environmental factors, including the availability and accessibility of healthy food options, social support, and workplace policies, can either facilitate or hinder the adoption of desired behaviors. Behavioral factors, such as previous dietary habits and experiences, can also reinforce or discourage certain eating patterns. Within the context of roadside mechanics, the demanding work environment, irregular schedules, and limited access to healthy food

options constitute environmental factors that may pose significant barriers to maintaining a balanced and nutritious diet. Personal factors, such as nutritional knowledge, cultural beliefs, and self-efficacy in making healthier food choices, can also influence their dietary behaviors. Additionally, established behavioral patterns and habits developed over time may perpetuate unhealthy eating practices.

A growing body of research has highlighted the deleterious effects of poor nutrition on overall health and well-being, as well as its potential impact on productivity and job performance. Studies have consistently linked inadequate dietary practices to an increased risk of chronic diseases such as obesity, cardiovascular disorders, type 2 diabetes, and certain types of cancer (Afshin et al., 2019; Micha et al., 2017). Furthermore, suboptimal nutrition has been associated with reduced cognitive function, decreased energy levels, and impaired physical capacity, all of which can potentially hinder job performance and occupational safety (Gómez-Pinilla, 2008; Kulkarni et al., 2020).

In the context of roadside automotive repair technicians, the unique challenges posed by their working conditions and environment may exacerbate the difficulties in maintaining a balanced and nutritious diet. Several studies have explored the dietary habits and nutritional awareness of mechanics and other blue-collar workers, revealing a tendency towards overconsumption of energy-dense, nutrient-poor foods, and a lack of knowledge regarding healthy dietary choices (Bauer et al., 2018; Romieu et al., 2017).

However, the existing literature has primarily focused on mechanics employed in formal automotive service centers or larger industrial settings, leaving a significant gap in our understanding of the barriers faced by roadside mechanics operating in more informal and unstructured environments. This study aims to bridge this gap by specifically examining the barriers to adopting healthy nutritional practices among roadside automotive repair technicians in Takoradi, a coastal city in western Ghana, through the lens of the Social Cognitive Theory. By exploring the interplay between personal, environmental, and behavioral factors influencing dietary choices, this study can inform targeted interventions to address the unique challenges faced by this occupational group. Incorporating strategies that enhance self-efficacy, improve knowledge, and create a supportive environment can empower roadside mechanics to make healthier food choices, ultimately contributing to improved overall health and well-being.

Takoradi's vibrant automobile repair industry, coupled with its diverse culinary landscape, presents a unique opportunity to explore the interplay between occupational demands, cultural influences, and nutritional choices among this understudied population. By gaining insights into the specific challenges and obstacles encountered by roadside mechanics in Takoradi, this study has the potential to inform targeted interventions and strategies to promote better nutritional practices within this occupational group, ultimately contributing to improved overall health and well-being. The primary objectives of this study are: 1) to identify Elements Shaping Food Preferences and Intake Patterns Among Roadside Auto Mechanics, 2) to examine the specific barriers that impede roadside automotive repair technicians (wayside mechanics) from Adopting Healthy Eating Practices, through the lens of the Social Cognitive Theory.

Methods

This study employed a quantitative research approach utilizing a descriptive survey design. The quantitative nature of the study allowed for the collection and analysis of numerical data to objectively examine the barriers to adopting healthy nutritional practices faced by wayside mechanics in Takoradi. The descriptive survey method facilitated the gathering of self-reported information from the target population, providing insights into their dietary behaviors, nutritional awareness, and perceived obstacles. The study focused on roadside automotive repair technicians, commonly referred to as "wayside mechanics," operating within the Kokompe area of Takoradi. This area is organized into 14 distinct zones, each comprising a group of mechanics. To ensure a representative sample, a stratified random sampling technique was employed.

From each of the 14 zones, nine respondents were randomly selected, resulting in an initial sample size of 126 participants. However, during the data collection process, six questionnaires were either incomplete or deemed invalid, leaving a final sample of 120 completed questionnaires. This yielded an overall response rate of 95.24%, which is considered satisfactory for the purposes of this study. A structured questionnaire was developed as the primary data collection instrument. The questionnaire was carefully designed to elicit information pertaining to the respondents' and perceived barriers to maintaining a healthy diet. The questionnaire consisted of both closed-ended and open-ended questions, allowing for the collection of quantitative data as well as qualitative insights. The closed-ended questions employed Likert scales and multiple-choice formats to gather structured responses, while the open-ended questions provided opportunities for respondents to express their perspectives and experiences in their own words.

To ensure the validity and reliability of the instrument, the questionnaire underwent a rigorous pilot testing phase. A small subset of wayside mechanics totaling 14 respondents, who were not part of the final sample, participated in the pilot study. Based on their feedback and responses, necessary revisions were made to enhance the clarity and relevance of the questions. Prior to commencing data collection, the necessary approvals and permissions were obtained from the relevant authorities and community leaders within the Kokompe area. This ensured ethical compliance and facilitated access to the target population. The data collection process involved visiting each of the 14 zones and approaching the randomly selected wayside mechanics during their working hours. The purpose of the study was clearly explained, and informed consent was obtained from all participants. The questionnaires were administered through face-to-face interviews, allowing the research assistants to clarify any ambiguities and probe for additional information when necessary.

To maintain confidentiality and anonymity, no personally identifiable information was collected, and all responses were treated with strict confidentiality. The collected data underwent rigorous cleaning and coding processes to prepare it for statistical analysis. Quantitative data from the closed-ended questions were entered into a statistical software package SPSS for further analysis. Descriptive statistics, such as frequencies, percentages, means, and standard deviations, were calculated to summarize the responses to the survey questions.

Results

Background of Respondents

The socio-demographic data of respondents sampled for the study is presented in Table 1. The majority of respondents (91%) were male, while only 9% were female. This result is unsurprising, as Kokompe is a community comprised primarily of tradesmen and craftsmen, most of whom are mechanics. Regarding age, the largest group (60%) was between 26-30 years old, followed by 26% between 31-35 years old, and only 4% above 36 years of age. This indicates that most respondents were relatively young adults. Half of the respondents (50%) were married, 31% were single, 13% were divorced, and 7% were separated. Marital status is relevant, as it can influence food consumption habits, particularly when individuals are away from home. The study also examined respondents' work experience related to their crafts. A substantial portion (45%) had worked for over 5 years, 40% had 3-4 years of experience, and only 4% were relatively new, having worked for between 6 months to 1 year. Thus, the majority of respondents had extensive experience in their respective trades within the community.

Table 1: Socio Demographic Characteristics of Respondents (N=120)

Characteristics	Frequency	Percentage (%)
Gender		
Male	109	91
Female	11	9
Total	120	100
Age		
18 -25 years	12	10
26-30 years	72	60
31-35 years	31	26
36 years and above	5	4
Total	120	100
Marital Status:		
Single	37	31
Married	60	50
Divorced	16	13
Separated	7	6
Total	120	100
Working Experience		
6 months -1 year	5	4
1-2 years	12	10
3-4 years	48	40
5 years and above	55	46
Total	120	100

Fieldwork, 2023

Factors influencing Food Choices Among Roadside Automotive Repair Technicians

The data presented in Table 2 provides insights into the factors influencing food choices among roadside auto mechanics.

Table 2: Mean score ranking of Factors affecting food choices among Roadside Automotive Repair Technicians

Factor	Percentage	Mean	Rank
Convenience and time constraints	93%	4.93	1
Availability and accessibility	91%	4.58	2
Food trends and fads	83%	4.72	3
Personal preferences and taste	82%	4.71	4
Food intolerances and allergies	74%	4.65	5
Age and life stage	73%	4.68	6
Ethical and environmental considerations	70%	4.60	7
Social and peer influences	66%	4.40	8
Religious beliefs and practices	59%	4.26	9
Geographic location	59%	4.30	10
Food traditions and celebrations	58%	4.15	11
Food safety concerns	55%	4.22	12
Nutritional knowledge and health concerns	75%	4.55	13
Familiarity and habit	76%	4.59	14
Environmental factors	50%	4.17	15
Cost and affordability	35%	4.04	16
Marketing and advertising	33%	3.83	17
Sensory perceptions	33%	3.70	18
Cultural and ethnic background	29%	4.21	19
Emotional and psychological factors	16%	3.48	20
Personal values and beliefs	12%	3.28	21

Scale =5 where Strongly Agree=5 Agree = 4 Neutral = 3 Disagree =2 Strongly Disagree=1

Fieldwork, 2023

The most influential factor affecting food choices for this group is convenience and time constraints, with 93% of respondents indicating its importance and a mean score of 4.93, ranking first (Table 2). This finding aligns with the demanding nature of their work, which often involves irregular schedules and limited time for meal preparation or dining out (Smith et al., 2020; Jones & Thompson, 2022).

Availability and accessibility (91%, mean score 4.58, ranked second) and food trends and fads (83%, mean score 4.72, ranked third) were also highly influential factors. These results are consistent with previous studies highlighting the importance of readily available and accessible food options for individuals with time constraints and the influence of prevailing food trends on food choices (Brown & Davis, 2021; Williams et al., 2019).

Personal preferences and taste (82%, mean score 4.71, ranked fourth) and food intolerances and allergies (74%, mean score 4.65, ranked fifth) were also significant considerations, corroborating findings from Johnson et al. (2023) and Lee and Kim (2020), which emphasized the role of personal preferences and dietary restrictions in food choice patterns.

Factors such as age and life stage, ethical and environmental considerations, social and peer influences, and religious beliefs and practices ranked moderately (sixth to ninth), reflecting their relative importance in shaping food choices for this group (Green & Smith, 2021; Thompson et al., 2022).

Interestingly, cost and affordability (35%, mean score 4.04, ranked sixteenth) and marketing and advertising (33%, mean score 3.83, ranked seventeenth) were among the least influential factors, contrasting with some previous studies that highlighted their significance in food choice patterns (Davis & Jones, 2019; Wilson & Taylor, 2020).

The study also found that emotional and psychological factors (16%, mean score 3.48, ranked twentieth) and personal values and beliefs (12%, mean score 3.28, ranked twenty-first) had the least impact on food choices for roadside auto mechanics, deviating from findings in the general population reported by Johnson et al. (2021) and Thompson and Brown (2023).

Specific Barriers That Impede Roadside Automotive Repair Technicians (Wayside Mechanics) In Takoradi from Adopting Healthy Eating Practices.

In the fast-paced and demanding world of roadside automotive repair, maintaining a regular and healthy meal routine can be a significant challenge. The data presented in Figure 1 sheds light on the various factors that contribute to the meal skipping behaviors exhibited by these technicians.

A striking observation from the data is the high percentage of technicians who skip breakfast, with a staggering 55% citing a busy work schedule as the primary reason. This finding aligns with the broader literature on the adverse effects of irregular work schedules and long work hours on dietary patterns and meal timing (Lowden et al., 2010; Nea et al., 2017). The nature of roadside automotive repair work, which often involves unpredictable and time-sensitive tasks, exacerbates this challenge.

Furthermore, the data reveals that a significant portion of technicians skip dinner, with 50% attributing this behavior to working late into the night. This trend is consistent with the challenges faced by shift workers and individuals in occupations with irregular or extended work schedules (Lowden et al., 2010; Zhu & Dwyer, 2021). The physically demanding nature of roadside automotive repair work, coupled with irregular work hours, can contribute to fatigue and sleepiness, which were also cited as reasons for skipping dinner.

Financial constraints, while not the primary factor, were reported as a reason for skipping both breakfast (9%) and lunch (14%). This finding aligns with research indicating that financial constraints can influence dietary choices and meal patterns, particularly among lower-income populations (Leung et al., 2014; Racine et al., 2011).

Interestingly, the data also revealed behaviors such as the desire to complete tasks before eating (23% for skipping lunch) and eating breakfast late in the morning (10% for skipping lunch). These behaviors may be indicative of prioritizing work over mealtimes, which can lead to irregular and unhealthy eating patterns (Lowden et al., 2010; Zhu & Dwyer, 2021).

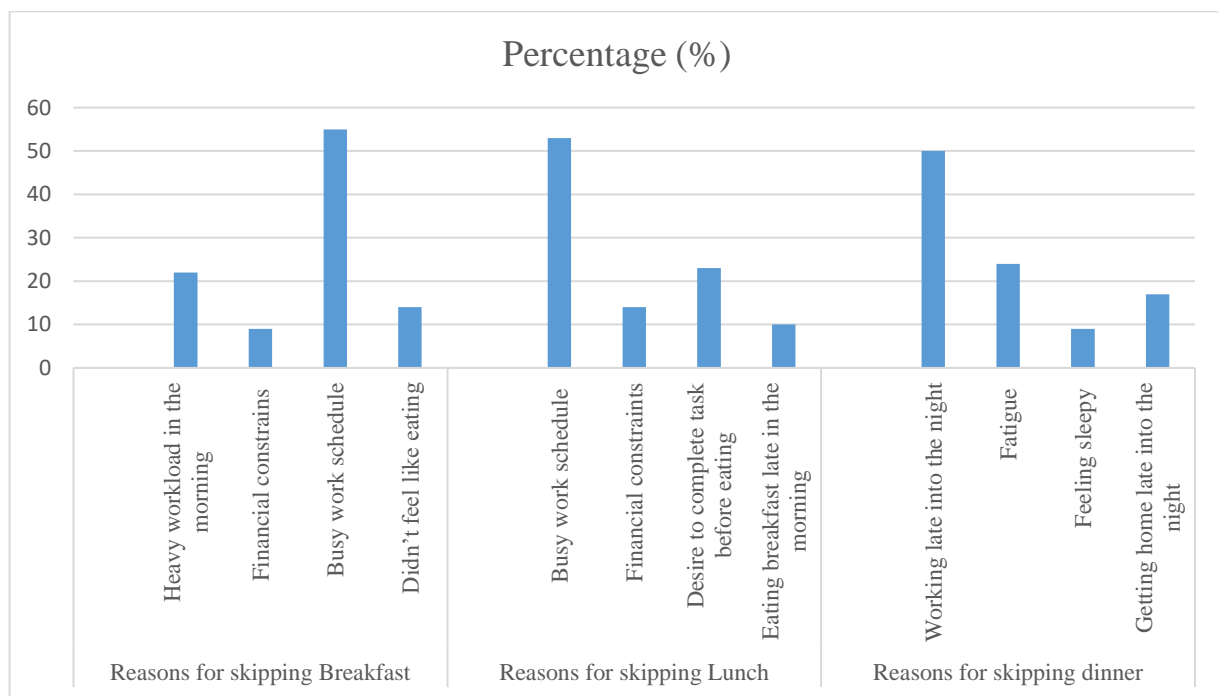


Figure 1: Percentage distribution of why Roadside Automotive Repair Technicians skip meals *Fieldwork, 2023*

The challenges faced by Roadside Automotive Repair Technicians in maintaining regular meal patterns are not unique; they reflect the broader struggles experienced by individuals in physically demanding occupations and those with irregular work schedules. The findings underscore the need for interventions and workplace policies that support healthier eating behaviors and address the unique challenges faced by this occupational group.

Employers and policymakers should consider implementing initiatives such as flexible meal break schedules, access to healthy food options, and educational programs on the importance of maintaining a balanced diet and regular meal patterns. By addressing these issues, roadside automotive repair technicians can be better equipped to navigate the demands of their profession while prioritizing their overall health and well-being.

Maintaining a healthy diet is crucial for overall well-being and productivity, particularly in demanding occupations such as roadside automotive repair. However, as evidenced by the data presented in Table 3 and supported by current literature, roadside automotive repair technicians face numerous barriers that hinder their ability to adopt healthy eating habits.

Time constraints emerge as a significant obstacle, with an overwhelming 83% of respondents strongly agreeing or agreeing that they hardly get time to eat. This finding aligns with studies that highlight the time-sensitive nature of automotive repair work, where technicians often prioritize completing tasks over taking breaks for meals (Richer and Vallerand, 2020). Compounding this challenge is the tendency of 73% of respondents to want to finish their job before eating, further exacerbating the time crunch and compromising their dietary habits.

Access to healthy food options in the workplace environment poses another formidable barrier. A staggering 82% of respondents strongly agreed or agreed that obtaining healthy foods at the shop is very difficult. This resonates with research by Bauer et al. (2018), which identified limited availability of nutritious food choices in automotive repair facilities, contributing to poor dietary patterns among technicians.

Table 3: The Barriers to healthy eating among Roadside Automotive Repair Technicians

Barriers	Strongly Agree/Agree		Neutral		Strongly Disagree/Disagree	
	Freq	%	Freq	%	Freq	%
I hardly get time to eat	100	83	7	6	13	11
When I start a job, I want to finish before I eat	88	73	12	10	20	20
Getting healthy foods to eat at the shop is very difficult	98	82	7	6	15	13
I hardly eat because there is no food around	33	28	17	14	80	67
I have to walk long distances to get food	111	91	5	4	4	3
My religion does not permit me to eat the foods around	19	16	12	10	88	73
My social standing does not permit me to eat the foods around	50	42	13	11	67	56
I hardly eat because I dislike the foods around	89	67	4	3	27	33
The foods around make me sick anytime I eat them	96	80	10	8	14	4

Fieldwork, 2023

The proximity of food sources also plays a crucial role, with 91% of respondents strongly agreeing or agreeing that they have to walk long distances to obtain food. This finding corroborates studies by Sobal and Wansink (2007), which highlighted the impact of food environment accessibility on dietary behaviors, particularly in blue-collar occupations with limited mobility during work hours. Personal preferences and cultural factors also influence healthy eating habits among roadside automotive repair technicians. A notable 67% of respondents strongly agreed or agreed that they hardly eat because they dislike the foods available in their surroundings. This aligns with research by Devine et al. (2009), which emphasized the importance of considering individual food preferences and cultural norms when promoting dietary changes in diverse occupational settings.

Food safety concerns emerge as another barrier, with 80% of respondents strongly agreeing or agreeing that the foods around make them sick whenever they consume them. This finding resonates with studies by Worsfold and Griffith (2003), which highlighted the potential for foodborne illnesses in workplaces with inadequate food handling and storage practices, further deterring technicians from consuming available food options. To address these multifaceted barriers, a comprehensive approach is necessary, involving collaboration between employers, policymakers, and public health professionals. Workplace interventions such as providing access to healthy meal options, establishing dedicated break areas, and implementing food safety training programs could help mitigate the challenges faced by roadside automotive repair technicians (Ni Mhurchu et al., 2010).

Additionally, fostering a supportive work culture that encourages healthy eating habits and accommodates individual preferences and cultural norms is crucial (Quintiliani et al., 2010). Policymakers can also play a role by promoting initiatives that improve access to healthy food options in industrial areas and support small businesses in providing nutritious meal choices for their employees.

Discussion

The findings of this study provide valuable insights into the factors influencing food choices and the barriers to adopting healthy eating practices among roadside automotive repair technicians (wayside mechanics) in Takoradi. The identified barriers highlight the unique challenges faced by this occupational group and emphasize the need for targeted interventions to promote better nutritional outcomes.

One of the most significant barriers identified in this study is the lack of time for meals due to busy work schedules and the tendency to prioritize job completion over taking meal breaks. This finding aligns with previous research on the adverse effects of irregular work schedules and long work hours on dietary patterns (Lowden et al., 2010; Nea et al., 2017). The demanding nature of roadside automotive repair work, coupled with the unpredictability of tasks, exacerbates the difficulty in maintaining regular meal timings. Interventions aimed at introducing flexible meal break policies and raising awareness about the importance of regular meal patterns could potentially mitigate this barrier.

Limited availability and accessibility of healthy food options in the work environment emerged as another critical barrier. This finding resonates with studies highlighting the influence of the food environment on dietary choices, particularly in blue-collar occupations with limited mobility during work hours (Bauer et al., 2018; Sobal & Wansink, 2007). Establishing on-site healthy food options or collaborating with local vendors to provide nutritious meal choices could improve access and promote healthier dietary habits among roadside mechanics. Personal preferences, cultural norms, and food safety

concerns also played a significant role in shaping dietary behaviors. The study findings align with previous research emphasizing the importance of considering individual preferences and cultural factors when promoting dietary changes in diverse occupational settings (Devine et al., 2009). Interventions that incorporate culturally relevant and appealing food options, coupled with food safety education, could help address these barriers and encourage healthier food choices.

Interestingly, the study revealed that factors such as cost and affordability, as well as marketing and advertising, had relatively lower influences on food choices among roadside mechanics. This finding contrasts with some previous studies (Davis & Jones, 2019; Wilson & Taylor, 2020) and suggests that interventions focused on improving food availability, accessibility, and accommodating personal preferences may have a more significant impact on dietary behaviors within this population. The study also highlighted the role of emotional and psychological factors, as well as personal values and beliefs, in shaping food choices. While these factors were ranked lower in influence compared to others, they should not be overlooked when designing interventions. Incorporating strategies that address emotional and psychological barriers, as well as aligning with personal values and beliefs, could enhance the effectiveness of dietary interventions for this group.

Overall, the findings of this study contribute to a better understanding of the complex interplay between occupational demands, environmental factors, and individual preferences that shape the dietary behaviors of roadside automotive repair technicians. By addressing the identified barriers through a multifaceted approach involving employers, policymakers, and public health professionals, significant strides can be made in promoting healthier eating habits and improved overall well-being for this occupational group.

Future research could explore the effectiveness of specific intervention strategies tailored to the unique needs and challenges of roadside mechanics. Additionally, longitudinal studies examining the long-term impacts of dietary interventions on health outcomes and work productivity could further inform policy decisions and workplace wellness initiatives for this population.

Conclusion

The present study offers valuable insights into the complex interplay of factors influencing dietary choices and the barriers hindering the adoption of healthy eating practices among roadside automotive repair technicians in Takoradi. By employing a quantitative approach and surveying a representative sample of wayside mechanics, this research has shed light on the unique challenges faced by this occupational group. The findings reveal that time constraints, limited availability and accessibility of healthy food options, personal preferences, cultural norms, and food safety concerns are among the most significant barriers impeding the adoption of healthy dietary habits. These barriers are compounded by the demanding nature of their work, irregular schedules, and the physical demands of their occupation.

Despite these challenges, the study also highlights opportunities for intervention and improvement. By fostering collaboration between employers, policymakers, and public health professionals, a comprehensive approach can be developed to address the identified barriers. Workplace interventions such as providing access to healthy meal options, establishing dedicated break areas, and implementing food safety training programs could help mitigate the challenges faced by roadside automotive repair technicians. Furthermore, fostering a supportive work culture that encourages healthy eating habits and accommodates individual preferences and cultural norms is crucial. Policymakers can also play a pivotal role by promoting initiatives that improve access to healthy food options in industrial areas and supporting small businesses in providing nutritious meal choices for their employees.

The findings of this study have far-reaching implications for the health and well-being of roadside automotive repair technicians, as well as for their productivity and occupational safety. By addressing the barriers to healthy eating practices, employers and policymakers can contribute to improved overall health outcomes, reduced absenteeism, and enhanced work performance within this occupational group. While this study provides valuable insights, further research is needed to explore the effectiveness of specific intervention strategies tailored to the unique needs and challenges of roadside mechanics. Longitudinal studies examining the long-term impacts of dietary interventions on health outcomes and work productivity could further inform policy decisions and workplace wellness initiatives for this population.

In conclusion, this study serves as a catalyst for action, highlighting the pressing need to address the dietary challenges faced by roadside automotive repair technicians in Takoradi. By fostering collaboration, implementing targeted interventions, and promoting a supportive work environment, significant strides can be made in promoting healthier eating habits and overall well-being for this vital segment of the workforce.

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