

COST BENEFITS ANALYSIS: NUTRITIOUS FOOD AS MEDICATION IN
HEALTHCARE INSURANCE COVERAGE

by

BALASUBRAMANIAM KOLAPPAPILLAI, Master's in Computer Application

DISSERTATION

Presented to the Swiss School of Business and Management Geneva

In Partial Fulfillment

Of the Requirements

For the Degree

DOCTOR OF BUSINESS ADMINISTRATION

SWISS SCHOOL OF BUSINESS AND MANAGEMENT GENEVA

SEPTEMBER 2021

COST BENEFITS ANALYSIS: NUTRITIOUS FOOD AS MEDICATION IN
HEALTHCARE INSURANCE COVERAGE

by

BALASUBRAMANIAM KOLAPPAPILLAI

APPROVED BY



Dr. Apostolos Dasilas Ph.D., Chair

RECEIVED/APPROVED BY:

SSBM Representative

Dedication

THIS DISSERTATION IS DEDICATED TO ALL HEALTHCARE INSURANCE
CONSUMERS AND HEALTHCARE INSURANCE PAYER BUSINESS IMPACTED
DUE TO THE COVID-19 PANDEMIC

Acknowledgements

Throughout the doctoral journey, I have many people to thank for supporting me. Firstly, I want to thank God for the enablement to complete the doctoral degree. Through this trying time, the constant protection from God was outstanding as I was unscratched during the Covid-19 pandemic. Secondly, I would like to thank my supervisor and dissertation chair of my research, Professor **Dr. Aaron Nyanama**, for the continuous support, advice, comments and critics, and encouragement throughout this dissertation's development. Thank you, prof. It would have been impossible to complete the research work without your guidance.

I am also grateful to SSBM management and staff for granting me the opportunity to study at a high-caliber business school, all the doctoral students and colleagues for their contribution during the study.

Moreover, I would like to show gratitude **Shaffer Christopher P**, Staff VP Pharmacy Mgmt (US), The Elevance Health Companies, Inc. & **Naga Yanamandra Lalitha**, Sr Manager Strategic Planning (IND), Caelon Global Solutions India LLP for offering valuable insights into my research work and extended guidance with case study pointers from Healthcare Payer & Service supporting me with writing this dissertation.

Finally, I dedicate this doctoral degree to my family **Kangavalli Mani**, **BaavikaSai**, **KrithikeshSai** and family & friends for their immense support during my studies; their commitment and moral support contributed to completing the doctoral research. Thank you, and may God richly bless you all.

ABSTRACT
COST BENEFITS ANALYSIS: NUTRITIOUS FOOD AS MEDICATION IN
HEALTHCARE INSURANCE COVERAGE

BALASUBRAMANIAM KOLAPPAPILLAI
2024

Dissertation Chair: **Dr. Apostolos Dasilas Ph.D.**

Today lifestyle of all economic centric individuals handling healthcare expenditure has drastically gone up post COVID-19 known as Corona Virus that broke up in 2020 onwards, This research proposal focus the discussion on expansion of insurance coverage towards awareness on nutritious food as medication and effective physical activities along efficient competencies in economic crisis management through healthcare insurance benefits coverage for each service in India so that individuals health care commands reduced medical cost at crisis in almost every developing country addressing such economic crisis. Increased awareness about health benefits through natural food source and physical activities to keep the internal healing & autoimmune system effectively helps human capital in life model established in current corporate live style.

TABLE OF CONTENTS

List of Tables	viii
List of Figures	x
CHAPTER I: INTRODUCTION.....	1
1.1 Introduction.....	1
1.2 Research Problem	5
1.3 Purpose of Research.....	8
1.4 Significance of the Study	9
1.5 Research Purpose and Questions	13
CHAPTER II: REVIEW OF LITERATURE	16
2.1 Theoretical Framework.....	16
2.2 Theory of Reasoned Action	16
2.3 Human Society Theory	55
2.4 Summary	57
CHAPTER III: METHODOLOGY	59
3.1 Overview of the Research Problem	59
3.2 Operationalization of Theoretical Constructs	62
3.3 Research Purpose and Questions	70
3.4 Research Design.....	79
3.5 Population and Sample	84
3.6 Participant Selection	88
3.7 Instrumentation	91
3.8 Data Collection Procedures.....	94
3.9 Data Analysis	96
3.10 Research Design Limitations	99
3.11 Conclusion	100
CHAPTER IV: RESULTS.....	103
4.1 Research Question One.....	104
4.2 Research Question Two	114
4.3 Summary of Findings.....	118
4.4 Conclusion	134
CHAPTER V: DISCUSSION.....	136
5.1 Discussion of Results	136
5.2 Discussion of Research Question One	138

5.3 Discussion of Research Question Two	141
6.1 Summary	144
6.2 Implications.....	146
6.3 Recommendations for Future Research	148
6.4 Conclusion	151
REFERENCES	158
APPENDIX A SURVEY COVER LETTER	167
APPENDIX B.....	170
INFORMED CONSENT FOR INTERVIEW	170
APPENDIX C INTERVIEW GUIDE	171

LIST OF TABLES

Table 2.1. Potential benefits from ‘Food as Medicine’ - Consumer awareness on “Food as Medicine”

Table 2.2. Consumer awareness about cost benefits on “Food as Medicine”

Table 3.1. Healthcare Insurance Consumer – Survey Participation Span

Table 4.1. Response summary detail (2024) for Food as Medicine - Does Health Insurance have coverage for "Culinary medicine"?

Table 4.2. Response summary detail (2024) for Food as Medicine - Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions?

Table 4.3. Response summary detail (2024) for Food as Medicine - Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels?

Table 4.4. Response summary detail (2024) for Yoga (Physical Activities) - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities?

Table 4.5. Response summary detail (2024) for Food as Medicine - Have ‘food be thy medicine and medicine be thy food’ communication from Healthcare Insurance helped in cost benefits?

Table 4.6. Response summary assessment study (2024 vs 2023) for Food as Medicine - Does Health Insurance have coverage for "Culinary medicine"?

Table 4.7. Response summary assessment study (2024 vs 2023) for Food as Medicine - Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions?

Table 4.8. Response summary assessment study (2024 vs 2023) for Food as Medicine - Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels?

Table 4.9. Response summary assessment study (2024 Vs 2023) for Yoga (Physical Activities) - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities?

Table 4.10. Response summary assessment study (2024 Vs 2023) for Food as Medicine - Have 'food be thy medicine and medicine be thy food' communication from Healthcare Insurance helped in cost benefits?

Table 5.1 Are the Healthcare Insurance Consumer have awareness about consuming right food and physical activities (Yoga) serve as best medicine? Yes

Table 5.2 Are the Healthcare Insurance Consumer have awareness about consuming right food and physical activities (Yoga) serve as best medicine? No (Need Improvement/ Not Aware/ Not Tracked/ Not Always/ Limited Awareness)

Table 5.3. Have the awareness about consuming right food and physical activities (Yoga) help with cost effectiveness? Yes (Switched from Low Ded-High Prem to High Ded-Low Prem)

Table 5.4. Have the awareness about consuming right food and physical activities (Yoga) help with cost effectiveness? No (Limited, No Change)

LIST OF FIGURES

Figure 2.1. Potential Cost Benefits Awareness from ‘Food as Medicine’.

Figure 2.2. Potential Cost Benefits Analysis from ‘Food as Medicine’

CHAPTER I:
INTRODUCTION

1.1 Introduction

Life of Healthcare Insurance consumers from all economic centric handling the expenses caused due to post COVID-19 impact from 2020 onwards from epic centers heavily populated with busy lifestyle had to experience the palpable connection between the virus and the financial implication (*Ian I. & Mitroff, 2020*) a prime example of a wicked mess. In current healthcare industry, payments ('claims') of medication for each service are covered based on 'Allowed Amount - Maximum amount on which payment is based for covered health care services, This may be called 'eligible expense', 'payment allowance' or 'negotiated rate' and If service provider charges more than the allowed amount, member may have to pay the difference (*Anugraha et al., 2024*) as determinants of Out-of-Pocket Health Care Expenditures and Financial Coping Strategies among Beneficiaries of a State-Run Health Insurance Scheme in South India. Meanwhile, Enrolling in a comprehensive plan and proactively addressing health and financial aspects can fortify the stability of families. The insurance plan benefits needs to be used effectively by adapting to evolving circumstances and prioritizing the well-being with yoga (*Ed Johnson et al., 2022*) and (*Denise et al., 2023*)) and prosperity of the household. Having public health insurance can

significantly impact an individual's utilization of healthcare services, it encourages to promptly seek medical attention without hesitating or avoiding treatment due to financial worries. This results in higher utilization of healthcare services, encompassing routine check-ups, preventive care, and timely intervention for illnesses and injuries (*Vaibhavi et al., 2024*) as per Public Health Insurance Status and Utilization of Healthcare Services Across India. But, as a Healthcare Insurance consumer, will grieve with 'Triple burden of disease' between growing communicable diseases, along nutrition related health problems and rampantly increasing non-communicable diseases added to the triple burden (*Swetha et al., 2020*) as per prevalence of catastrophic health expenditure. Clinical programs from healthcare insurance providers creating awareness about opportunity to utilize natural healing process (Nutritious Food Medication & Yoga) through effective communication opportunities in current technology accessibilities by applying mobile technology (*Abdelaziz et al., 2022*) will help in addressing the better utilization of services.

Global Pandemic has impacted all sectors of the industries, organizations, productions, supply chains and its consumption, hence considered as the third and greatest economic, financial, social crisis of the 21st Century of the world. (*Joda P., et al., 2003*) "*Spend Less. Eat Well. Feel Better.*" (*SLEWFB*) is a 3-hour intervention designed to improve food resource management ability, health, and food security status. The findings imply that

further investigation of coupling financial aid with effective life skills education is warranted in the Journal of Nutrition Education and Behavior (*Radhika, 2002*).

As specified, the research discussion is beyond the expansion of coverage awareness from healthcare insurer on financial security, cashless transaction, taxation benefits, continuity benefits and helping in medical emergency (*Vilasini & Smita, 2023*) about Motivations And Barriers to Purchase Health Insurance on qualitative study. Nutritious food as medication and effective physical activities along efficient competencies to support the family in economic crisis management with Strategic Management and Economics in Health Care on healthcare insurance (*Michael & Anna, 2021*) benefits coverage for each service in India, Awareness of India's national health insurance scheme "Pradhan Mantri Jan Arogya Yojana" on Awareness of India's national health insurance scheme (*Diletta et al., 2023*). As a relative subdiscipline of economics and it has made or stimulated numerous contributions to various areas of the main discipline: the theory of human capital as detailed in Handbook of Health Economics (*Elsevier et al., 2000*), healthcare insurance coverage economics has been always remarkable and welcomed numerous aids for main discipline food as medicine continuum (*Ruyu Yao et al., 2023*) such as: Food-medicine products are important materials for daily health management and are increasingly popular in the global healthy food market. Perhaps it has an even greater effect outside the field of economics,

introducing terms such as opportunity cost, elasticity, the margin, and the production function into medical parlance at crisis are likely to be as heavily cited in clinical economics literature because of large share of public resources on yoga philosophy (*Ashok Kumar, 2017*) and (*Sebi, 2020*) about the step by step guide to Cleanse the Colon that guide human health care need for insurnace consumers in almost every developing country during economic crisis. While modern day science is unable to fathom some medical mysteries, in recent days ancient method is supportring successful treating of various diseases such as kidney dysfunction, diabetes, heart disorders, infertility, Thyroid etc through old science Pulse Balancing (*Jun-Sang, 2024*) suggestion for Objective Evaluation of Comparative Pulse Diagnosis. Post Covid break, The creation of new forms of specific mineral (Zinc) delivery to target cells can make it possible to obtain smart chains of food ingredients. Recent evidence supports the idea that the optimal intake of zinc or bioactive compounds in appropriate supplements should be considered as part of a strategy to generate an immune response in the human body. Therefore, controlling the amount of this element in the diet is especially important for populations. As detailed in Improving Dietary Zinc Bioavailability Using New Food Fortification Approaches: A Promising Tool to Boost Immunity in the Light of COVID-19 (*Marouance et al., 2023*). To support consumers during the crisis situation is in making educated choices about their coverage

(includes communication preferences) and successfully navigating the health care sources, efforts to increase health insurance literacy frequently concentrate on offering clear, easily available information. Providers can communicate with (insurer) patients through their preferred communication method, such as phone, mail, or secure messaging can help ensure that members are aware of their coverage and can make informed decisions about their healthcare.

1.2 Research Problem

While it is true that the global order faced various challenges from scores of incidents due COVID-19 pandemic and there is a wide-ranging of study around financial progress for individuals about Cost-Benefit analysis indicates the positive economic benefits of the expanded food and nutrition education program related to chronic disease prevention (*Radhika et al., 2002*) enrolled under healthcare insurance from the diversified (Lower Poverty, Middle Class & Higher Class) society growth living in Souther part of India. Indicators about benefits from Physical Activity and Exercise for Older Adults (*Jeorge & Willy M., 2022*), Consumption of Nutritious food to combat COVID-19 (*Apurba, 2021*) and Joy in Living: The Alkaline Way Paperback, (*Russell, 2021*) need attention within society about the awareness of such wealth of benefits through to be

communicated by Payers & Plansponsors of Health Insurance Market as detailed in universal healthcare coverage in India (*Sanjay & Habib, 2018*). Most significant requirements for solving the problem during financial crisis across the Lower – Middle income community as detailed in Challenges for Lower-Middle-Income Countries in Achieving Universal Healthcare: An Indian Perspective (*Meena G & Harvinder, 2023*) would be the extensive awareness about eating healthy to support the healing process with Eating and Healing, Traditional Food as Medicine (*Andrea & Lisa, 2006*) with better clinical culture reconnecting and rediscovering your healing capacities by embracing a nature, nurture, and wholeness approach for life discussed in Thriving in the 21st Century (*Russell, 2022*) through organic sources which reduces the traffic at healthcare service providers and supports the insurance consumers handle critical (need for help) services only through providers covered in Health Insurance Coverage in India. General human system operation and nutrition requirement awareness for home medication summarised as the value of self-medication: summary of existing evidence (*Taylor, 2018*) in midst of the insurance consumers is lagging because of the current busy lifestyle and culture orientation which indirectly impacts financial progress of individuals, Studies shows that healthcare insurance provider & employers generally focus organizational capitulation and increased network establishment cultures leads into limiting the awareness about superior

business performance such as clinical and cost benefits of medical nutrition therapy from registered dietitian nutritionists at management of dyslipidemia insighted as the value of incorporating medical nutrition therapy by a registered dietitian nutritionist in clinical practice (*Katherine & Carol F., 2018*). In complementary to food medicine, physical activities supports the human health benefits of exercise (*Gregory N., et al., 2018*) is at the most basic level for healthy life without blood glucose (A single exercise bout increases glucose uptake by skeletal muscle, sidestepping the insulin receptor and thus insulin resistance in Type 2 Diabetes patient), it is vital that study as part of this research geared towards a steady finding that efficient & effective health care between insurance provider & consumer including the essentials (Nutritious Food Medication & Physical exercise - Yoga) to be part of the Healthcare Insurance Marketing departments (Government & Private) program communication changing paradigm of healthcare communications in India (*Asawari, 2023*), In India, empowering stakeholders in the healthcare ecosystem, including patients and consumers, is a top priority for health communication. Involving patients in healthcare decisions through various communication channels is key. Utilizing technology can help understand patients' problems and needs, blurring the boundaries between healthcare professionals and patients while facilitating faster delivery of healthcare processes.

1.3 Purpose of Research

The focus of this study was extending the research around the factors supporting the healthcare insurance consumer society for better utilization of benefits offered and present the advantages of increased awareness about “Nutritious Food Medication” & “Physical Exercise – YOGA” support as organic source for natural healing process that helps the Lower – Middle class economic society availing health insurance in Southern part of India. In this study, I intend to examine increase awareness about Natural source of food products & standard physical courses supplement toward organic healing process for pandemic situations caused due to various factors (e.g. Covid-19) with effective communication (*Asawari, 2023*) detailing on changing paradigm of healthcare communications in India. Communication played a crucial role in sharing accurate and up-to-date information about the virus, prevention measures, critical information carrying methods from Healthcare Insurance Providers to insured members and continuing the similar communication methods on the healthcare communications landscape will keep evolving and shifting as we move forward. It will be characterized by a growing reliance on digital channels, increased patient engagement, and a continued emphasis on collaboration and trust-

building (*Asawari, 2023*) would support insured members with cost benefits (saving & avoidance) from consumption of Health Insurance Payments in India.

1.4 Significance of the Study

In order to accomplish the goal of this study & its significance of research, following were the key components on focus:

- Emphasis the influence of organic food source orientations about the nutrition from Cullinary Medicine included as Complementary Medicine as part of the medical service porivded by providers in India about clinical lipidiology (*Katherine S., 2015*)
 - Nutrition therapy reduced triglyceride (TG) 48.8% (-73.3 to -23.2) median (interquartile range).
 - TG reduction with nutrition therapy was independent of pharmaceutical treatment.
 - TG reduction with nutrition therapy was independent of prior nutrition counseling (*Katherine S., 2015*)

- Creating awareness about YOGA as part of physical activity orientations through expertise channel to the insured members as general behavior of Day-to-day lifestyle of society in India as detailed in COVID-19 – An Ancient practice for new condition (*Denise et al., 2023*).
- Evaluate the impact through efficiency of Standalone Health Insurance Companies to individuals insured in benefits offering for healthy lifestyle in India as detailed at Changing paradigm of healthcare communications in India - Establishing a dialogue with patients allows healthcare professionals to determine their agreement or disagreement with diagnoses and treatments, ensuring a clear path to recovery. Using simple language that patients can understand and feel comfortable with builds trust and confidence. Listening to and empathizing with patients is of utmost importance, as it encourages open communication and supports patients in conveying their fears and concerns (*Asawari, 2023*).
- Channel for effectiveness of Expanded Food and Nutrition Education Program in Changing Nutrition-Related Outcomes Among Adults with Low Income in India summarized in Journal of Nutrition Education and Behavior, 2002 February - Provide an estimated cost-benefit ratio for the

Expanded Food and Nutrition Education Program (EFNEP), based on potential prevention of diet-related chronic diseases and conditions. (*Radhika, 2002*).

- Opportunity to implement efficient communication model of Humane on Crisis management orientation using various communication opportunity by Health Insurance Providers in India as wearable activity trackers and mobile phone apps are promising potential self-management tools for maintaining physical activity, By applying a wearable activity tracker, mobile phone app, and push messages, our study showed strong potential for the adoption of new technologies by older adults to maintain physical activity (*Abdelaziz et al., 2022*)

- Implementation methods for Assertiveness Orientation/Awareness of Healthy Lifestyle using nutritious food & standard physical programs to handle healthy society in India. Digital health application integrating wearable data and behavioral patterns improves metabolic health, 2023 November - The effectiveness of lifestyle interventions in reducing caloric intake and increasing physical activity for preventing Type 2 Diabetes (T2D) has been previously demonstrated. The use of modern technologies

can potentially further improve the success of these interventions, promote metabolic health, and prevent T2D at scale (*Ashkan et al., 2023*).

- Create sources to understand Future lifestyle of all Health Insurance Consumers on the better crisis management in India detailed in changing paradigm of healthcare communications in India, The healthcare communications landscape will keep evolving and shifting as we move forward. It will be characterized by a growing reliance on digital channels, increased patient engagement, and a continued emphasis on collaboration and trust-building. By embracing these changes, healthcare and pharma communications will contribute to advancing patient-centred care and achieving better health outcomes for all, in India and globally (*Asawari, 2023*).
- Evaluating the influence of Organic Food, Nutritious Food, YOGA, Understanding Health Insurance Coverage, Educational Programs, Effective communication, Humane Orientation, Assertiveness Orientation, and Future orientation of Health Insurance Consumers in India. Create a better future for Indian patients, a customized human-centric model is essential, Healthcare communications should not follow a one-size-fits-all

approach in India. It requires sensitivity and awareness of the realities patients face, bridging the gap between pharmaceutical MNCs and patients through integrated communication channels such as public relations, interactive sessions, workshops, handshake meets, digital platforms, community-based approaches, and partnerships (*Asawari, 2023*).

1.5 Research Purpose and Questions

The extended study support in presenting “Nutritious Food Medication & Physical Activities (Yoga)” as part of day to day life despite being part of any natural disaster causing human healthy model of life with increased focus on various forms of effective communication during the crisis situation, decision making and learning from catastrophe moment. Methodology of this study accentuates that creating engrossed alertness & announcement will be different at different situation of the predicament and here we are performing the study on specifics about Nutrition and Immune requirements imposed by Covid-19 in India by Health Insurance Providers and the associated sources (Food Nutrients & Yoga) can be used. Establishing the awareness with insurers by channeling information by respective teams and challenges addressed. Going further, the detailed learning through all sources concentrated on decision making about the study whether traditional food culture or alternatives help supplement the insurance consumers in

effective cost savings and if this can be considered as a long-term concept for positioning the awareness creation method for cost effectiveness (saving to members & avoidance to provider) as presented in the literature. Supplement Medication (Nutritious Food & Physical activity - Yoga) as a learning experience from this research supported in recommended and since Covid-19 was not known before, it would be captivating the study and its impact around the society availing healthcare insurance located from southern part of India: What were the lessons learnt from Nutritious Food Supplements & Physical Exercise during pandemic crisis? How Covid-19 adverse effect changed the society in consumption of food as medication? – the research focused on gathering answers around these subjects with questions. Actual responses from insurance consumers participated in the survey with awareness programs from employer about “Food Medication & Yoga” has an impact on Health Insurance company’s reputation, productivity and overall success. Presented summary will contribute into overall subject of this study and I do hope that my detailed analytics & research contributes in better understanding around the challenges of implementing “Nutritious Food Medication & Physical activity - Yoga” in these uncertain times as part of day to day life practice.

Questions submitted in the internal forum of organization being Healthcare Insurance provider to understand the pulse of the practice within organization employee working out of highly populated cities (Bengaluru & Hyderabad),

Are the Healthcare Insurance Consumer have awareness about consuming right food and physical activities (Yoga) serve as best medicine?

Food as Medicine:

- ✓ Does Healthcare Insurance provides coverage for “Culinary medicine”?
- ✓ Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions?
- ✓ Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels?

Yoga (Physical Activities)

- ✓ Did Healthcare Insurance conducted physical activities programs for healthier life styles or any form of communication to encourage in physical activities?

Have the awareness about consuming right food and physical activities (Yoga) help with cost effectiveness?

- ✓ Have ‘food be thy medicine and medicine be thy food’ communication from Healthcare Insurance helped in cost benefits?

CHAPTER II:
REVIEW OF LITERATURE

2.1 Theoretical Framework

The primary objective of this segment is to present the theoretical framework upon which the study was carried with research. In the arranged segments of this section talks about, a detailed overview about the concepts '**Nutritious food as medication**' and '**Effective physical activities – Yoga**' supplements health benefits and provide cost effective lifecenter at economic predicament for better lifestyle with comprehensive healthcare insurance benefits coverage insights from supporting references relevant for this study.

2.2 Theory of Reasoned Action

A Brief Overview of Effective Health Insurance Benefits Coverage & Economic Crisis,

The State and Scope of Health Economic summarized in handbook of health economics volume 2 (*Mark V et al., 2011*) in general supports the common factors utilized to determine the impact of crisis situation around the economics of society. The society draw its path through the hypothetical goals in general by following the principals around the four traditional parts of the system; investment and assurance, industrial segments, labor and

public assets. Demand for supplying the sources for these sectors would require basic understanding around the economic coverage to support the society but it required depth insight for healthcare (natural source & cultured insights) and technology with insituations to support the program as per public requirements. Understanding about benefits supported by Healthcare Insurance providers and plansponsors requirements in the market plays critical role as the coverages includes mandatory policies and regulations with relevant articles submitted in journal as detailed inline,

- a) *Aleda M.H. Chen, Juanita A. Draime, Sarah Berman, Julia Gardner, Zach Krauss and Joe Martinez: Food as medicine program communication from Healthcare Payer in market about Food as medicine? Exploring the impact of providing healthy foods on adherence and clinical and economic outcomes, (Aleda et al., 2022). Adherence to dietary guidelines is low (<50%) despite positive impacts in disease progression, clinical outcomes, and medical costs. It is important to summarize the impact of providing medically-tailored meals to patients on adherence rates, clinical outcomes, and potential economic outcomes. A systematic review was conducted to identify, extract, and appraise food-provision studies for heart disease, diabetes (DM), and chronic kidney disease (CKD). The key findings related to adherence and clinical outcomes*

were compiled and providing medically-tailored meals significantly increases dietary adherence above 90% and allows patients to realize significantly better chronic disease control. Patient adherence was high when food or meal items were provided, and patients often experienced reduction in key clinical outcomes, such as decreased weight and BMI, improved A1c, lowered blood pressure, and improved renal function. Dietary modification is a key component of medical therapy in the treatment of many chronic diseases, including diabetes, cardiovascular disease, and chronic kidney disease. Additionally, patients are often not equipped with the required knowledge, skills, time, and resources to adequately plan, cook and eat meals that adhere to the recommended diet. Introduction of essential and approaching informative communication from the insurance payer to consumer of the insurance coverage benefits is easier and less costly to prevent disease-based complications and progression than to manage acute issues. Through this, patients could experience fewer complications (CV events, hospital readmissions and dialysis), resulting in significant annual US healthcare cost reduction of \$27–48 billion. Culinary medicine provides medically-tailored meals which integrates evidence-based medicine and nutrition to create diet

recommendations in which to prevent and assist patients with medical conditions, Investing in a prescribed/recommended diet is likely to be more beneficial for insurers, employers, and other payers, as preventing the complications and comorbidities associated with obesity and disease progression could result in significant cost savings. For example, a diabetes prevention program that costs \$450 per participant could result in as much as \$35,000 in annual individual savings.

- b) Caroline Susie - Principal, Mercer and Andy Halpert - Senior Clinical Consultant, Mercer, Trinity Cleveland Associate, Medical Consultant, Mercer: It's time to bring "Food as Medicine" into your health program Food aids individuals by supporting health by the employer as plansponsor to employee as consumer of the benefifits for effective utilization but it has the potential to enhance it. Healthy eating habits can be hard to adopt or maintain for those living in food deserts or who have difficulty covering the higher costs of fresh, health-conscious foods. This is where the Food as Medicine movement comes in. Employers can potentially address food insecurity and nutrition insecurity by considering a benefit to deliver and/or subsidize healthy food. Employers can further support employees who are experiencing complex health issues by*

offering delivery of medically tailored meals (MTMs) once the patient returns home from the hospital. MTMs are fully prepared home-delivered meals designed by a registered dietitian to address specific medical needs. Highmark Health recently launched such a pilot for members with qualifying chronic health conditions who are at high-risk for food insecurity. Produce prescriptions offer another more flexible Food as Medicine option that can be added to an organization's wellness program or as part of a medical benefit for employees. Many employers offer free wellness apps such as WeightWatchers and Noom that focus on nutrition; however, if an employee can't afford fresh produce (over canned or processed foods) or if they live in an area where fresh produce isn't readily available, they are less likely to see the full benefit of a wellness program.

- c) *Adithya Pradyumna, Arima Mishra, Jürg Utzinger and Mirko S. Winkler: Deepen the understanding on how health concerns and the role of the health sector are addressed across food systems policies in India Health in Food Systems Policies in India (Adithya et al., 2021). A variety of health concerns spanning nutritional, communicable and non-communicable diseases (NCDs) were included in the analysis. Undernutrition received specific attention even*

beyond nutrition policies. Only few policies mentioned NCDs, infectious diseases, and injuries. Governing and advisory bodies were instituted by 17 of the analysed policies (eg, food safety, agriculture, and food processing), and often included representation from the health ministry (9 of the 17 identified inter-ministerial bodies). This study demonstrated a method for analysis of health consideration and intersectoral coordination in food policy documents, which could be applied to studies in other settings and policy domains. In this review, though the health ministry is often represented in inter-ministerial groups to govern food systems and effective policies for food medication, measures to systematically include health considerations in food policy should be explicitly described and further to be enhanced.

d) Amit Dang, MD, Dimple Dang, MBA, and B.N. Vallish, MD.: Increasing US health plan coverage for exercise programming in community mental health settings for people with serious mental illness (Amit et al., 2021) Importance of Evidence-Based Health Insurance Reimbursement and Health Technology Assessment for Achieving Universal Health Coverage and Improved Access to Health in India. Healthcare reimbursement, defined as the way in which an insured person is repaid for healthcare spending, depends on how much the

payers are willing to pay for the covered services and products on the behalf of their insurance plan subscriber. EBH aims to improve the quality of patient care and patient satisfaction at reduced costs to the patient by integrating research-based clinical evidence with clinical expertise and patient's values and preferences. These evidences generated by analyzing facts collected in a specific manner replaces previously accepted interventions based on anecdotal and experiential opinions with newer interventions that are more powerful, accurate, reliable, efficacious, safer, better, and cost-effective.

- e) *Sachin Kumar Sharma, Savita Agnihotri, Niranjan Kala, and Shirley Telles: Detailed review of this study reports perceived benefits as outcomes of yoga perceived by yoga-naïve persons on the perceptions about the Benefits and Negative Outcomes of Yoga Practice. A Cross-sectional Survey, (Sachin Kumar et al., 2022) includes the most common perceived benefit of yoga practice was “improvement in physical health,” with “apprehension that wrong or excessive practice could be harmful” as the most common perceived negative outcomes of yoga. Several surveys have reported yoga practitioners’ benefits from yoga practice, A survey on yoga practitioners in India reported that the most common benefits were improvement in (i) physical fitness, (ii) mental state, and (iii)*

cognitive functions. The three most common perceived benefits of yoga were of three categories, namely (i) physical health which includes improved physical fitness, better physical strength, balance, flexibility, body weight regulation, and ability to carry out physical activity (ii) cognitive health indicates an improvement in attention, concentration, learning, and memory, and (iii) mental health functions included positive affect, increased satisfaction with life, and reduced depression. Enhanced communication method from the Insurance provider will help with improving the lifestyle of individuals through the employer benefits coverage.

- f) *Sanjay Zodpey and Habib Hasan Farooqui: Universal Health Insurance in India Ensuring Equity, Efficiency about Universal Health Coverage in India (Sanjay & Habib, 2018): Progress achieved & the way forward) and Quality to support the indian health system is characterized by a vast public health infrastructure with High out-of-pocket (OOP) health expenditures poses barrier to access for healthcare and the goal of implementing universal health insurance, which can be a major step in reducing health disparities and OOP health expenditure. Out-patient coverage from private sector insurance in India*

with a growth of 25% in the health insurance business during the last few years with the expansion of the private health insurance sector.

- g) *Rahul Hegde, Karthamada Ganapathy Kiran and Nanjesh Kumar S: Presently people are getting aware of health insurance, through acquaintances, health insurance agents, mass media etc., but this awareness has not yet resulted in satisfactory levels of enrolment/utilisation. As the results have shown, only 30.4% of households are being covered by some form of health insurance scheme, a large chunk of the population is still financing health care expenditure without health insurance coverage. Moreover it was observed that a large proportion of the eligible households were unaware about Government funded Health insurance schemes about knowledge, coverage and usage patterns of Health Insurance in Rural South India, (Rahul Hegde et al., 2020).*
- h) *Sanjay Zodpey and Habib Hasan Farooqui: The final goal of Health Insurance Benefits is to ensure that all citizens have access to essential healthcare services without facing financial hardship taken in Universal Health Coverage in India: Progress achieved & the way forward (Sanjay & Habib, 2018). Ayushman Bharat is one of the recent mission from the government with ambitious health coverage, Ayushman Bharat supports two major schemes, Health and Wellness*

Centers and National Health Protection Scheme (Roosa et al., 2018). Health and Wellness Centers are projected as a foundation of the health system to offer comprehensive primary care, whereas National Health Protection Scheme (Roosa et al., 2018) is to provide financial risk protection for society under poverty arising out of secondary and tertiary care support for medication to the coverage of five lakh rupees per year for a family. Definitely, the dream of progressive health care coverage for all is the long-term goal for Indian government.

- i) *Meenu G. Sharma & Harvinder Popli: Universal health coverage by 2030 is a commitment of the global community adopted as Sustainable Development Goal 3.8., as defined by WHO insisted as Challenges for Lower-Middle-Income Countries in Achieving Universal Healthcare: An Indian Perspective (Meena G & Harvinder, 2023), leading all citizen will have access to adequate health coverage through the services offered through government monitored channels and private players to support the need without major financial hardship. However, society with lower income of the countries, forced with demanding priorities, find themselves having hard time by struggling to muster enough resources to supports the path forward this goal at the desired pace. India*

currently running with huge lower-middle-income society accounting for around 18% of the world's population and fighting hard in performing to move towards the goal will with significant impact on achieving UHC at a global level.

j) William H. Frist, M.D in 'Health Care in the 21st Century', journal of medicine talks about health care in the 21st century (William H, 2005) participating in healthcare by housing best aspects of healthcare coverage and unleashed the creative power of the progressive marketplace with dramatic support to healthcare system with lower costs, higher quality and stronger access to care. With this planning, enhancing the awareness within insurance consumers about Nutritious Food Medication & Yoga will support the criterion process of health economics with remarkably successful discipline (the theory of human capital) through outcome realized and valued (the methodology of cost-effective analysis) as cost effectiveness.

k) According to Mark. J. Kay in International Journal of Pharmaceutical and Healthcare Marketing- September 2007 - A "salient" or critical to the discipline of healthcare marketing by analyzing and contrasting the consumer (or patient) perspective with the institutional (or organizational) perspective.

Healthcare marketing has profound impact based on behavior that significantly affect the healthcare system at economic crisis situation. For example, the growth of direct to consumer (DTC) towards pharmaceutical demand communication has enlarged 4 interests in providing treatments for new and stimulated patients for consultation with medical service providers and the long claimed specialized “disease management” coverage system result in a “carve up” that reduces the competence of the healthcare system overall. When the accountability for healthcare is pulled away from a primary care provider, it may hinder their ability to deal with difficulties resulting from treatment to patients may not be diagnosed as required and cared by the lowerlevel staff to handle the demand during Pandemic situation. The narrow focus of specialist providers can negate the “continuum of care” vital to patients’ physical and psychological sense of well-being (McEachern, 1995). Creating increased cognizance around the COVID-19 with food security during COVID-19 and global food security from Insurance coverage by the providers about global food and nutrition security will address increased efficiency of the healthcare provider system for consumers with lower income.

- l) *Elizabeth H. Marchlewicz MPH, RD, Melvyn Rubenfire MD, and Robert D. Brook MD - Medical nutrition therapy is the essential cornerstone for effective treatment of “refractory” severe hypertriglyceridemia regardless of pharmaceutical treatment - Evidence from a Lipid Management Program talks about individualized nutrition therapy results in changes in eating behavior and reductions in triglyceride levels in patients with refractory severe hypertriglyceridemia independent of lipid-lowering medication(s) and prior nutrition counseling. The importance of both diet and pharmacologic treatment in clinical management of severe hypertriglyceridemia and embracing the nutritional process within medical conditions supports the self healing system of human references in journal of clinical lipidology (Katherine S., 2015)*
- m) *N.B. SWETHA, S. SHOBHA, and S. SRIRAM - Prevalence of catastrophic health expenditure and its associated factors, due to out-of-pocket health care expenses among households with and without chronic illness in Bengaluru, India: says ‘Triple burden of disease’ makes catastrophic health expenditure with lower income society requires long-term follow-up for chronic illness (Swetha et al., 2020). Awareness about the nutritious food and following*

principles on food habit reduces the risk factor and support better economic condition discussed in An Attractive Dietary Approach to Prevention and Management of Type 2 Diabete (Sodai, 2020) during such pandemic situation.

n) *Jessie Inchauspe: Change in food practice - Glucose, or blood sugar, is a tiny molecule in our body that has a huge impact on our health. It enters our bloodstream through the starchy or sweet foods we eat. Ninety percent of us suffer from too much glucose in our system—and most of us don't know it. Glucose Revolution: The Life-Changing Power of Balancing Your Blood Sugar (Jessie, 2022) book talks about, The symptoms? Cravings, fatigue, infertility, hormonal issues, acne, wrinkles. And over time, the development of conditions like type 2 diabetes, polycystic ovarian syndrome, cancer, dementia, and heart disease.*

Drawing on cutting-edge science and her own pioneering research, biochemist Jessie Inchauspé offers ten simple, surprising hacks to help you balance your glucose levels and reverse your symptoms—without going on a diet or giving up the foods you love. For example:

-What small change to your breakfast will unlock energy and cut your cravings

-How eating foods in the right order will make you lose weight effortlessly

-What secret ingredient will allow you to eat dessert and still go into fat-burning mode, Improve all areas of your health from your sleep, cravings, mood, energy, skin, weight, and even slow down aging, with “simple and accessible science-based hacks” (The Fast Diet - Michael Mosley, MD) to manage your blood sugar levels while still eating the foods you love.

(Gregory N., et al., 2018) - Exercise Provides Too Many Benefits to “Fit into a Single Pill”, Exercise is a powerful tool in the fight to prevent and treat numerous chronic diseases listed below,

Worsening of 40 conditions caused by the lack of physical activity with growth, maturation, and aging throughout life span

- 1. Accelerated biological aging/premature death*
- 2. Aerobic (cardiorespiratory) fitness (VO2max)*
- 3. Arterial dyslipidemia*
- 4. Balance*
- 5. Bone fracture/falls*
- 6. Breast cancer*
- 7. Cognitive dysfunction*
- 8. Colon cancer*
- 9. Congestive heart failure*
- 10. Constipation*

11. *Coronary (ischemic) heart disease*
12. *Deep vein thrombosis*
13. *Depression and anxiety*
14. *Diverticulitis*
15. *Endometrial cancer*
16. *Endothelial dysfunction*
17. *Erectile dysfunction*
18. *Gallbladder diseases*
19. *Gestational diabetes*
20. *Hemostasis*
21. *Hypertension*
22. *Immunity*
23. *Insulin resistance*
24. *Large arteries lose more compliance with aging*
25. *Metabolic syndrome*
26. *Nonalcoholic fatty liver disease*
27. *Obesity*
28. *Osteoarthritis*
29. *Osteoporosis*
30. *Ovarian cancer*
31. *Pain*
32. *Peripheral artery disease*

33. *Preeclampsia*
34. *Polycystic ovary syndrome*
35. *Prediabetes*
36. *Rheumatoid arthritis*
37. *Sarcopenia*
38. *Stroke*
39. *Tendons being less stiff*
40. *Type 2 diabetes*

Given its whole-body, health-promoting nature, the integrative responses to exercise should surely attract a great deal of interest as the notion of “exercise is medicine” continues to its integration into clinical settings.

As studied in details through the sources available above helped in addressing the effectiveness of this requirement “Food Nutrition” for the society using healthcare insurance demands high out of pocket during crisis, establishing a strong communication process as an enhancement by the Healthcare Insurance provider for effective utilization of available sources such as ‘Food Medication’ as part of day to day life situations with the help of awareness program by payer organization and plansponsor included in the strategies to support society living in souther part of Inida with cost effectiveness through known opportunities by

reducing the risk of impact to human health system. despite the vast differences in medical care institutions across countries for potential better process in cost savings during critical & prolong medication that support insurer & insurance provider at economic crisis.

Awareness & Cost Effectiveness with usage of “Nutritious Food Medication & Yoga”

In this review process on the research literature, focus of the insurance consumers & insurance provider was given around the strategy to increase the awareness program about communication model during pandemic situation and understanding the importance about help required for the survival from the community through insurance for healthcare at market supports in tackling economic problems without any hassle and navigating the new normal with focus on healthcare accessibility, innovation and sustainability (*Naina, 2022*). Also, assertive communication method with strategy supporting society in building trust during pandemic impacted society study in the value of self-medication: summary of existing evidence (*Taylor, 2018*) on benefits coverage established by Insurance about ‘Nutritious Food Medication & Yoga’ provides a chance in implemeting the cost effectiveness as detailed in below studies,

a) *Aleda M.H. Chen, Juanita A. Draime, Sarah Berman, Julia Gardner, Zach Krauss and Joe Martinez: Food as medicine? Exploring the impact of providing healthy foods on adherence and clinical and economic outcomes (Aleda et al., 2022), provides awareness on chronic disease prevalence is increasing and communication from the insurance payer to consumer to prevent disease-based complications and progression than to manage acute issues. Through patients as insurance covered could experience fewer complications (CV events, hospital readmissions and dialysis), resulting in significant annual US healthcare cost reduction of \$27–48 billion. Culinary medicine provides medically-tailored meals which integrates evidence-based medicine and nutrition to create diet recommendations in which to prevent and assist patients with medical conditions, Investing in a prescribed/recommended diet is likely to be more beneficial for insurers, employers, and other payers, as preventing the complications and comorbidities associated with obesity and disease progression could result in significant cost savings. For example, a diabetes prevention program that costs \$450 per participant could result in as much as \$35,000 in annual individual savings. Dietary adherence was considered “compliant” or $\geq 90\%$ consistently. Significant ($p < 0.05$) clinical outcomes*

included 5–10% LDL reduction, 4-11 mmHg SBP reduction, 30% reduction in metabolic syndrome prevalence, 3–5% weight reduction, 56% lower CKD mortality rates, and increased dialysis-free time (2 years:50%, 5 years:25%, calculated cost savings of 80.6–94.3%).

b) Caroline Susie - Principal, Mercer and Andy Halpert - Senior Clinical Consultant, Mercer, Trinity Cleveland Associate, Medical Consultant, Mercer: It's time to bring "Food as Medicine" through the employer sponsored employee benefits for cost effective utilization. In this review, study published in JAMA found that national implementation of MTMs for high-risk individuals could produce a net cost savings of \$13.6 billion annually (\$2,500 per patient year). While MTMs are not widely covered by public or private health insurance plans, pilot programs have shown significant decrease in hospitalization and overall improvement in chronic disease management and some plans are taking steps in that direction. Many employers offer free wellness apps such as WeightWatchers and Noom that focus on nutrition (For example, health plan Oscar offers \$100 per year for healthy groceries for members with type 1 or type 2 diabetes who have an annual physical or wellness visit); Onsite cooking classes and lunch and learns, offering chef-inspired and

dietitian-approved recipes that are easy to recreate at home. Nutrition education sessions with registered dietitian nutritionists and supporting employee with flexible work hours to maintain healthy lifestyle activities including time for mindful eating with integration of nutrition support programs into existing EAP programs

- c) *Adithya Pradyumna, Arima Mishra, Jürg Utzinger and Mirko S. Winkler: Analysing the literature about nutritional implications of specific foods addressed across policies available for member consumption in India. Health in Food Systems Policies published as part of Health in Food Systems Policies in India (Adithya et al., 2021): A Document Review about health concerns spanning through relevant sectors (ie, food security, agriculture, biodiversity, food processing, trade, and waste management, besides health and nutrition). This review supported understanding the elements of food systems involve various actors, each of whom pursues different goals and priorities, for instance farmers are concerned about sustained income, and the public health sector aims to address malnutrition. One important outcome of food systems is people's health and well-being and thus it warrants specific attention. The challenge, however, is that the linkages between food systems and health care*

services are manifold and complex. Reduction of premature mortality due to CVDs, cancer, and diabetes by 25% by 2025 was listed as a priority (NHP). Intersectoral coordination for health in food systems governance was found to have occurred in two ways: (i) health policies encouraging other ministries towards nutrition-sensitive planning; and (ii) inclusion of health ministry representatives in inter-ministerial bodies. The coronavirus disease 2019 (COVID-19) pandemic further highlighted the vulnerabilities of food systems and their health ramifications in India (This study obtained ethical approval from the Padmashree Institute of Clinical Research in Bengaluru, India).

d) Elisabetta Della Valle, Stefano Palermi, Irene Aloe, Roberto Marcantonio, Rocco Spera, Stefania Montagnani, and Felice Sirico: A Systematic Review and Meta-Analysis on Effectiveness of Workplace Yoga Intervention conducted by employer for employee benefits about effectiveness of workplace yoga interventions to reduce perceived stress within employees (Elisabetta et al., 2020). Quantitative analysis showed an overall effect size of -0.67 [95% confidence interval (CI): $-0.86, -0.49$] in favor of Yoga intervention in reducing stress outcome measures. Hence, workplace Yoga interventions were more effective when compared to no treatment in work-related stress

management. Further high-quality studies are needed to improve the validity of these results and to specify more characteristics of the Yoga intervention, such as style, volume, and frequency. Work-related stress can be defined as an emotional consequence occurring when the workplace demand exceeds the worker's ability to handle during crisis situation, causing potential detrimental physical effects. It has a relevant role with effective benefits in the onset of cardiovascular, musculoskeletal and mental health disorders supporting the reduced utilization of deductible caused from doctor visits. Reference from the research conducted through the systematic review and analysis in assessing the effectiveness of Yoga interventions conducted at workplace in reducing perceived stress among employees. Work-related stress is a complex problem in occupational medicine, related to several psychosocial risk factors. A higher level of perceived stress among workers could contribute to determining health problems and promote the onset of some cardiovascular, musculoskeletal, and other diseases. The synthesis from 'Medical yoga in the workplace setting—perceived stress and work ability—a feasibility study. Complementary Therapy on Medical of the available evidence and its quantitative analysis prove the effectiveness of Yoga interventions carried out at workplaces in

decreasing perceived stress among employees, when compared to no-treatment’ - (Iben Axen et al., 2017).

e) Asawari Sathaye: Healthcare communication holds immense importance in the current scenario. As the pharmaceutical landscape shifts towards a more consumer-driven and patient-centric model, organizations need to adapt to this changing ecosystem study in Changing paradigm of healthcare communications in India (Asawari, 2023) from TOI. Meaningful dialogue among various stakeholders, including medical research institutes, hospitals, and patients, becomes paramount. Healthcare communications specialists through the Digital health application integrating wearable data and behavioral patterns improves metabolic health (Ashkan et al., 2023), embody the critical role of facilitating collaboration and communication among these diverse entities in India, empowering stakeholders in the healthcare ecosystem, including patients and consumers, is a top priority for health communication. Involving patients in healthcare decisions through various communication channels applying Mobile Technology to Sustain Physical Activity (Abdelaziz et al., 2022) is key. Utilizing technology can help understand patients’ problems

and needs, blurring the boundaries between healthcare professionals and patients while facilitating faster delivery of healthcare process support in experience with cost effectiveness evaluation by following the communicated insights about nutrition food and physical activities as directed.

f) Apurba Giri: Several functional foods or food ingredients, their mechanism of immune enhancing properties and use in food products have been discussed through seventeen chapters written by eminent authors. There are numerous therapeutic plants which have significant role for immunity boosting such as Ashwagandha, Tulsi, Shatavari, Giloy, Aloe vera, Amla, Neem, licorice, garlic, ginger, turmeric, rosemary, black cumin, cinnamon, sage, thyme, fenugreek, peppermint, black pepper, clove etc. These have been discussed in detail at the article about Immunity Boosting Functional Foods to Combat COVID-19 (Apurba, 2021)

g) Andrea Pieroni & Lisa Price: Conventional Food As Medicine respected in-depth case studies about the foods different regions of India using as medicines and supports in healing of infections with remedies through the nutritional deficiencies in diet. Assessments of living conditions located in various geographic region as well as variances in diet and remedies are thoroughly

discoursed and analytically reviewed to support the scientific suggestions of many use cases of traditional foods consumed as medicine and functional foods. Traditional Food As Medicine is also an vital study guide and supporting text about food and medicine practiced by traditional societies for educators, students from undergraduate through graduate levels, phytologists, and research analyst in nutrition and food science, anthropology, agriculture, ethnoecology, ethnobotany, and ethnobiology through the Eating and Healing Traditional Food As Medicine (Andrea & Lisa, 2006).

- h) *Gunjeet Kaur, MPH., Akashdeep Singh Chauhan, PhD., & Shankar Prinja, MD - Cost-effectiveness of population-based screening for diabetes and hypertension in India: an economic modelling study says lower levels of disease awareness and poor care seeking are the two major barriers for timely detection and treatment of diabetes and hypertension. India has implemented population-based screening for diabetes and hypertension as part of the National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke. In addition, the Ayushman Bharat Health and Wellness Centre programme aims to provide comprehensive primary health care for the treatment of diabetes and hypertension at health and*

wellness centres with an expanded scope of services, including care for non-communicable diseases. The scope of service expansion including the communication about “Nutritious Food” & “Physical Activity – Yoga” would support the increased cost effectiveness requirement.

- i) *Geeta Sikand MA, RDN, FAND, CDE, CLS, FNLA, Renee E. Cole PhD, RDN, LD, EP-C, SP, Deepa Handu PhD, RDN, LDN, Desiree deWaal MS, RDN, CD, FAND, Joanne Christaldi PhD, RDN, Elvira Q. Johnson MS, RDN, Linda M. Arpino MA, RDN, CDN, FAND and Shirley M. Ekvall PhD, RDN, LDN: Clinical and cost benefits of medical nutrition therapy by registered dietitian nutritionists for management of dyslipidemia through a systematic review and meta-analysis. Evidence from this systematic review and meta-analysis demonstrates that multiple MNT sessions by a RDN are clinically effective and cost beneficial in patients with dyslipidemia and cardio-metabolic risk factors associated to the data from 34 case studies referencing 5704 subjects. It includes number of individuals MNT sessions conducted face to face by RDN spanning from 3 to 21 months in navigating to significant improvements around lipid profile, body mass index, glycemic status, and blood pressure. Results documented with mean differences 95% confidence intervals as possible.*

Analysis from the pool includes MNT interventions lowered low-density lipoprotein cholesterol, triglycerides, blood glucose from fasting, hemoglobin A1c (blood glucose data from 90 days), and body mass index reviewed against a control group. Cost effectiveness and economic savings of MNT improved based on quality-adjusted life years and cost savings from reduced medication use discussed in Registered Dietitians Effective in Dyslipidemia (Geeta et al., 2018).

- j) *Abdelaziz Elnaggar, MBBS, MPH, Julia von Oppenfeld, BA, Mary A Whooley, MD, Stephanie Merek, MPH and Linda G Park, MS, FNP-BC, PhD: Applying Mobile Technology to Sustain Physical Activity After Completion of Cardiac Rehabilitation: Acceptability Study says applying a wearable activity tracker, mobile phone app, and push messages, our study showed strong potential for the adoption of new technologies by older adults to maintain physical activity after CR completion. 7 participants in this exercise completed the satisfaction questionnaires and participated in the interviews shared data helped in concluding that Fitbit and Movn mobile app received high satisfaction scores of 4.86 and 4.5, respectively, whereas push messages had a score of 3.14 out of 5. This study supports with efficient utilization of technology helps in*

maintaining better health avoid cost from out of pocket. Technology use increased motivation to be physically active, technology use served as a reminder to be physically active, recommendations for technology to improve user experience.

k) M.S. Krishnamurthy and JV Hebbar: Ayurveda is a traditional Indian medical system that uses a holistic approach to health and wellness. Ayurvedic Medicine product are derived from herbal, animal or mineral origin ingredients which is targeted to treat diseases based on traditional yet scientific principles. The book contains remedies using,

- ✓ Household ingredients such as ghee, honey, garlic, turmeric.*
- ✓ Spices such as ginger, cumin, black pepper and clove.*
- ✓ Pulses like black gram, green gram, horse gram.*
- ✓ Dairy products such as butter, ghee and yoghurt.*
- ✓ Dry fruits and nuts such as walnuts, dates, almonds and raisins.*
- ✓ Fruits such as pineapple, custard apple, banana and mango.*
- ✓ Vegetables like okra, cucumber, radish, carrot and more!*

Explanation of how exactly the remedies is useful, in which symptoms, in which stage of disease included in Easy Ayurveda Home Remedies (Krishnamurthy & Hebbar, 2019)

l) *Aditya Mahindru, Pradeep Patil, and Varun Agrawal: Role of Physical Activity on Mental Health and Well-Being: A detailed review explains physically inactive individuals have been reported to have higher rates of morbidity and healthcare expenditures analyzed in Role of Physical Activity on Mental Health and Well-Being (Aditya et al., 2023), The function of physical activity in preventing a wide range of chronic illnesses and premature mortality has been extensively examined and studied. Adequate evidence links medical conditions such as cardiovascular disease and individual lifestyle behaviors, particularly exercise. Regular exercise lowered the incidence of cardiometabolic illness, breast and colon cancer, and osteoporosis. In addition to improving the quality of life for those with nonpsychiatric diseases such as peripheral artery occlusive disease and fibromyalgia, regular physical activity may help alleviate the discomforts of these diseases. Yoga as an adjunctive treatment, Mind-body approaches have been the subject of a lot of studies, and some of the findings suggest they may aid with mental health issues on the neurosis spectrum. As defined by the National Center for Complementary and Alternative Medicine, "mind-body interventions" aim to increase the mind's potential to alter bodily functions. Yoga is used as a treatment for a wide range of conditions. Possible*

therapeutic benefits of yoga include the activation of antagonistic neuromuscular systems, stimulation of the limbic system, and a reduction in sympathetic tone. Translating the evidence of the benefits of physical exercise on mental health into clinical practice is of paramount importance on cost avoidance from illness.

m) Nitin Upadhyay, Aakash Kamble and Ajinkya Navare: Virtual healthcare in the new standard: Indian healthcare consumers adoption of electronic medication from government telemedicine service as digital healthcare aids required based on impacts from COVID-19 pandemic. E-government telemedicine service (EGTMS) in India, includes research study about the unified model of e-government adoption (UMEGA) with perceived severity, self-efficacy, and trust. Healthcare insurance consumers adopted with increased aware, active, and sensitive towards using healthcare information and services. Besides, social distancing and COVID-19-sensitive behavior in the post-pandemic era was crucial with challenge in preventing transmittable infections. Telemedicine service carried in Applying Mobile Technology to Sustain Physical Activity (Abdelaziz et al., 2022) that has witnessed an unprecedented demand during the pandemic supported patients as insurance consumer have all opportunity

to connect doctors remotely and maintain cost effectively (for example, infrastructure, healthcare services, etc.) and space and time barriers. “Ministry of Health and Family Welfare (MoHFW)” India has rolled out “National Telemedicine Service - eSanjeevani as a doctor-to-doctor telemedicine platform (e-government system)” advanced in implementing “Ayushman Bharat – the world's largest government-owned health insurance scheme” (PIB, 2021). Healthcare Insurance consumers in South Indian market are more cognitive, operational, and responsive in utilizing and sharing all the available healthcare services discussed in Virtual healthcare in the new normal: Indian healthcare consumers adoption of electronic government telemedicine service (Nithin & Aakash, 2023).

n) Denise Capela Santos, Sónia Jaconiano, Sofia Macedo, Filipa Ribeiro, Sara Ponte, Paula Soares, & Paula Boaventura: AN ANCIENT PRACTICE FOR A NEW CONDITION: literature review guided in understand that a substantial proportion of people with acute COVID-19 develop post-COVID-19 condition (previously known as long-COVID) characterized by symptoms that persist for months after the initial infection, including neuropsychological sequelae. Patients with post-COVID-19 condition frequency varies greatly according to

different studies, with values ranging from 4 to 80% of the complications in breathing due the impact in lungs. Yoga an ancient from Indian practice supported in all potentials of equilibrium mind and body by controlling person's emotions. Yoga – Physical stretches rely on the holistic principle of connecting the body, mind, and consciousness. It is a psycho-somatic approach which helps all parts of one's life through physical, mental and emotional spectrums. The practice from Yoga engages mind and body through its three pillars: asana (body postures), pranayama (breathing exercise), and meditation during the crisis situation. Widespread practice of Yoga increases both biomedical research on psychophysiology practices and clinical trials, supports in part by the NIH in the USA, and the Ministry of AYUSH in India. Reduction of inflammatory markers and improvement in the activity of the specific immune cells impacted during COVID-19 infection, distressing millions of people worldwide who are directly or indirectly affected by the COVID-19 disease. These low-cost and easily accessible method of physical activity keeps away from stress, anxiety and cost implications as solutions will be of paramount importance to protect world's population against the associated symptoms of mental ill-health (Denise et al., 2023)).

- o) *Jessie Inchauspe: The Glucose Goddess Method: The 4-Week Guide to Cutting Cravings, Getting Your Energy Back, and Feeling Amazing, she shares the “best practical guide for managing glucose in ‘The Glucose Goddess Method’ (Jessie, 2023) to maximize health and longevity with this four-week program to incorporating the principles of how to avoid glucose spikes into your everyday life. The study provides guidance through four simple, science-proven ways to steady your blood sugar, gaining boundless energy, curbing your cravings, clearing your skin, slowing your ageing process, and sleeping better than ever have before and supports in create positive new habits for life.*
- p) *Ruyu Yao, Chunnian He, and Peigen Xiao: Food and medicine continuum - The NFRPD Fellow and Advisory Group created a definition for “Food as Medicine” as part of year 1 of the NFRPD fellowship. In February 2021, the Academy of Nutrition and Dietetics Board of Directors approved the definition of “Food as Medicine” and it was added to the Academy’s Definition of Terms list, which is a resource that houses terms, definitions, and key considerations to support the profession of nutrition and dietetics. Food as Medicine is a philosophy where food and nutrition aids individuals through interventions that support health and wellness. Focus areas include:*

- ✓ *Food as preventative medicine to encourage health and well-being;*
- ✓ *Food as medicine in disease management and treatment;*
- ✓ *Food as medicine to improve nutrition security; and*
- ✓ *Food as medicine to promote food safety.*

(Ed Johnson et al., 2022)

Table 2.1. Potential benefits from ‘Food as Medicine’ - Consumer awareness on “Food as Medicine”

Variable	% (Yes)	N
The right foods can help keep me healthy and prevent me from suffering certain health problems	85%	824
The right foods can be therapeutic and help alleviate certain health problems	72%	824
Eating the right food can be the best medicine	72%	824
I am willing to spend more for food that can act like medicine	68%	824

N – number of participants

Healthcare Insurance Consumers see Potential Health Benefits from Food as Medicine

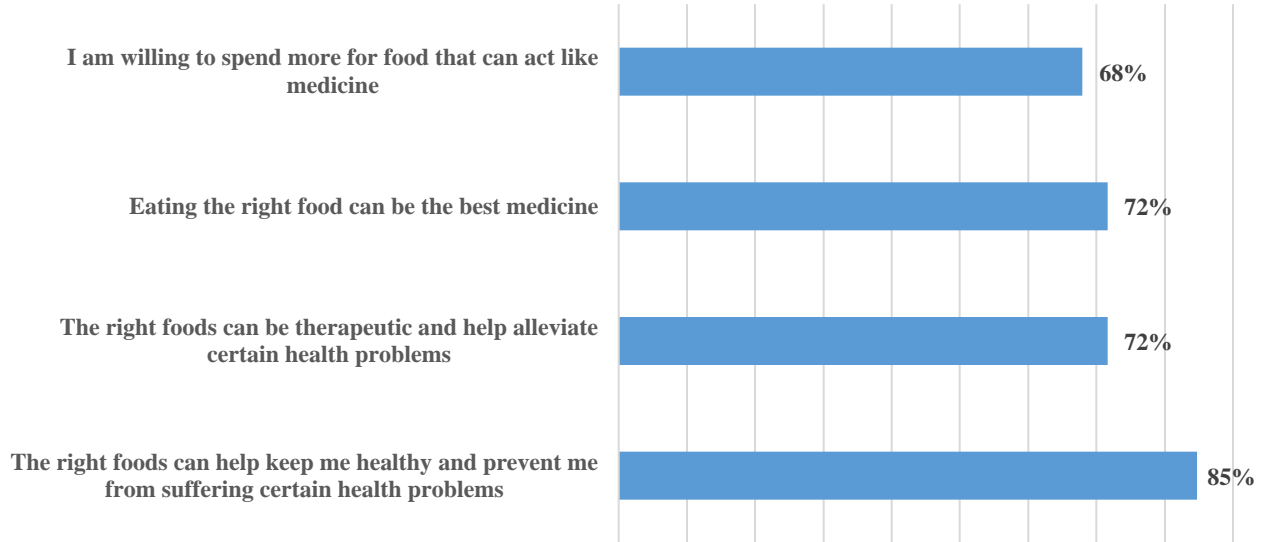


Figure 2.1. Potential Cost Benefits Awareness from 'Food as Medicine'

Table 2.2. Consumer awareness about cost benefits on “Food as Medicine”

Variable	% (Yes)	N
Food as Medicine - Does Health Insurance have coverage for "Culinary medicine"?	68%	824
Food as Medicine -Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions?	71%	824
Food as Medicine - Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels?	85%	824
Food as Medicine - Have ‘food be thy medicine and medicine be thy food’ communication from Healthcare Insurance helped in cost benefits?	72%	824
Yoga (Physical Activities) - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities?	89%	824

N – number of participants

Healthcare Insurance Consumers see Cost Benefits from effective communication on Food as Medicine

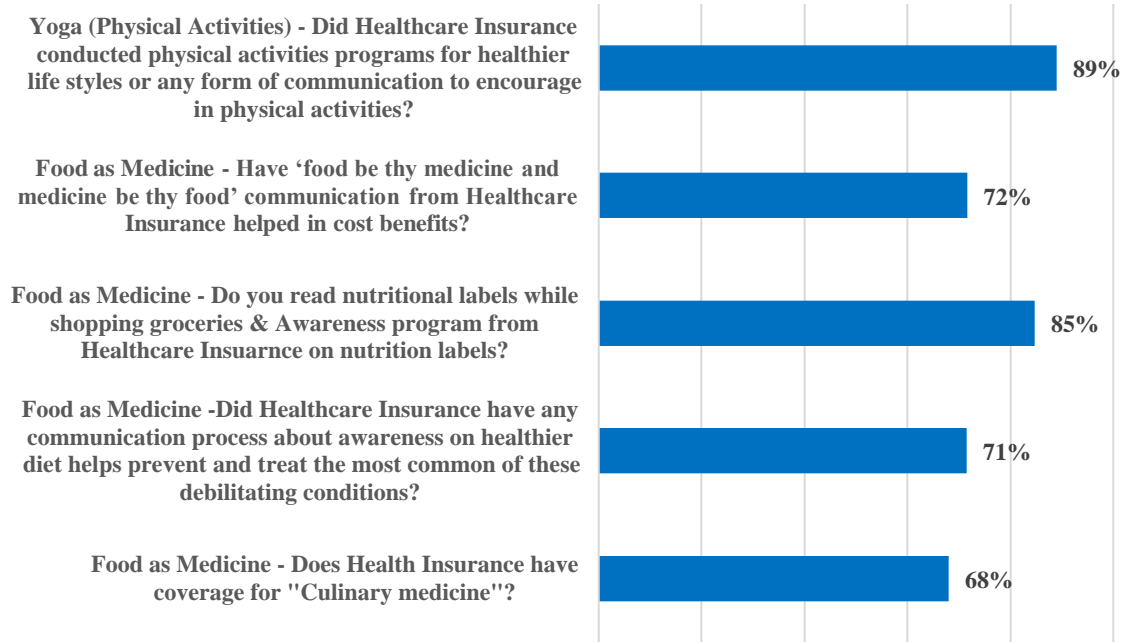


Figure 2.2. Potential Cost Benefits Analysis from 'Food as Medicine'

2.3 Human Society Theory

The key objective of this study is to advance with guidance of reliable data sources employed in the development of detailed research based on responses to the survey focused on specific aspects about healthcare insurance coverage benefits for consumers to perform the cost benefits analysis cares increased awareness on “Food as Medicine” & “Physical Activities – Yoga” supporting direction to Healthcare Insurance supply chain in India. Food security in India - statistics & facts (*Manya, 2024*) and Nutritious Food & Physical Activities - Yoga discussed as part ‘The value of self-medication: summary of existing evidence’ (*Taylor, 2018*) helps in achieve better understanding about diversified population across major cities from southern region of India. Resources from the population consuming the Healthcare Insurance Coverage from the consumer market (Employer & Employee) will be studied from major cities (Bengaluru & Hyderabad) located in South region of India have been pioneers in implementing PHFI (Public Health Foundation of India) with a large insurance cover for respondent selection, hence are probability and non-probability sampling with advantages and disadvantages associated on each sampling method reviewed and utilized for understanding ‘Utilization and financial protection for hospital care under publicly funded health insurance in states located in Southern India’ (*Samir Garg et al., 2019*).

Data for the research collected from employee's spanning between multiple designations starting from entry level to senior operations participating through survey within private organization provide wide variety of Healthcare Insurance Coverage benefits (*Healthcare Insurance Coverage in India*) using focused questionnaires on the topic about the benefits based on awareness program from Insurance provider and Employer with coverage for member includes "Food as Medication" (*Aleda et al., 2022*) & "Physical Activities – Yoga" on effectiveness of workplace yoga interventions to reduce perceived stress in Employees (*Elisabetta et al., 2020*) supporting clinical approaches for most common health conditions such blood glucose analyzed in 'Diabetes Care in India: A Descriptive Study' (*Jagannath V. & Shraddha Y, 2021*))and blood pressure cases reviewed as part of 'Hypertension in India: a systematic review and meta-analysis of prevalence, awareness, and control of hypertension' (*Raghupathy et al., 2014*) increased within population working at Information Technology sectors (*Indian Council of Medical Research, 2023*) due to work and irregular food (*Aleksandra et al., 2023*) habits at the work environment associated medications directly within quasi-market system, and better access to salient healthcare coverage for diabetics & blood pressure in minimal cost by consuming the nutritious food & physician exercises (Yoga) in the market with National Health Protection Scheme, (*Roosa et al., 2018*).

2.4 Summary

As researcher in this study, essential theories mentioned at each section in topic to address the gap in effective method by utilizing available sources supporting the principles of Nutritious Food Medication & Physical exercises (Yoga) through clinical programs, effective & efficient communication methods available in the current market by the Healthcare Insurance Payer consumer strategies for increasing the overall satisfaction of insurer and insurance provider supporting cost benefits (savings & avoidance) with improved effectiveness and more opportunities of reducing the risk around the healthcare available to consumers. Cost effectiveness monitoring process for chronological illness medication (blood glucose & blood pressure) will be more influential through transformative strategies to improve human healthcare in a progressive model. Both Healthcare Insurance Consumers and Healthcare Insurance Provider would benefit from more transparent systems on cost sharing insights referenced in Food as medicine - A bad diet's role (*Ed Johnson et al., 2022*) by integrating this Food Medication process & Physical Exercise procedures into benefits of consumer behavioral health services lines through clinical council outreach programs for blood glucose (diabetics) and blood pressure medications with hygienic medical services directly support healthy lifestyle and

indirectly help economically for subsidiary services such farmers and traditional practices in all possible communication methods discussed in digital health application integrating wearable data and behavioral patterns improves metabolic health (*Ashkan et al., 2024*). This initiative on healthcare insurance industry focus on developing and sustaining the better relationships between consumers & providers with the precious steps as indicated in this study to build the trust includes better benefits (in year over year cost savings) as return of investments for Healthcare insurer & insurance provider insights from effect of health insurance program for the poor on out-of-pocket (*Sriram & Khan, 2020*).

CHAPTER III: METHODOLOGY

3.1 Overview of the Research Problem

This section of the study provides detailed analytical process conducted to support research overview using Healthcare Industry standard methodology substantiate reference material institutes all situations and framework included in structural segments documented as:

1) A synopsis of the research presented as enterprise design and the indicators about supporting data collected, 2) Materials regarding the process used for the data operation supporting the various case studies utilized for evaluating the hypothesis, 3) Forum for discussion about the reliability and accuracy of the data collection, considered as part analysis, 4) Procedural insights used as technique to perform analysis on structural data collected through closed survey methodology, and documentation of metrics with adequate observations from study, and 5) Augmentation of discussions with supporting summary includes explanation of any ethical issues that may be associated with the methodology.

Enterprise research design subjected with applicable understanding about the problem of Healthcare insurance consumers and theory of explanation discussed in Challenges for Lower-Middle-Income Countries in Achieving Universal Healthcare: An

Indian Perspective (*Meena G & Harvinder, 2023*) about population from cities (Bengaluru & Hyderabad) will have challenges in access to quality health services, when and where need them without financial hardship for citizens earning between low-income and lower-middle-income until 2030 as defined by WHO. Increased awareness about ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ from the Healthcare Insurance organization of *government talks on changing paradigm of healthcare communications in India (Asawari, 2023) Voices, Health, TOI and insurance private sectors such as Universal Health Coverage in India Progress (Sanjay & Habib, 2018)* will help in addresses the challenge for healthcare insurance consumer through employer based on cost benefits insights through Healthcare Insurance Coverage program about implication due to blood glucose and blood pressure analyzed as part of 101 million diabetics, the Indian Council of Medical Research (ICMR) in a new study which was published in the journal 'The Lancet Diabetes and Endocrinology', said India is home to a whopping 315 million people with hypertension, and 101 million with diabetes (*Indian Council of Medical Research, 2023*) caused as per research study.

Research study at this section add insights about data requirements relevant to perform research analytics such as what data should be collected, and how the data will be analyzed using Government of India; Annual Report 2020-21 (*Insurance Regulatory and*

Development Authority of India, 2022) and (*National Health Authority, 2022*). The insurance industry in India has come a long way since its liberalization from the year 2000 and the industry had its own ups and downs, driven by a multitude of factors including the scale and frequency of regulatory changes, the global financial meltdown, evolving consumer awareness, the emergence of dominant channels like bancassurance, and changed market dynamics. Despite the progress made by the industry since the year 2000, India remains grossly underinsured compared to other developed economies both in terms of penetration and density (*International Journal of Recent Innovations in Academic Research, 2023*). This design and application of research study is dependent upon multiple influence factors that includes objective considered as part of the research, limitation (*C.F.R., 2006*). *Covered entities may not use or disclose PHI except as permitted or required by the Privacy Rule - restriction to display PHI/PII*) of data with availability to comprehend the analysis performed at Public Health Insurance Status and Utilization of Healthcare Services Across India (*Vaibhavi et al., 2024*), the cost associated with obtaining the required data through the secured channel, and the time constraints in gathering Year over Year insight to perform detailed study through systematic review method from Handbook for Systematic Reviews of Interventions version 6.1. Vol. 2020. (*Higgins et al., 2020*).

3.2 Operationalization of Theoretical Constructs

The key aspect as part of this section of study will be focused on reference of multidimensional process analytics (*Rinderla-Ma et al., 2018*) approach augments business process analytics with the multidimensional perspective on the analysis data to support the theory of this study and latter it typically eventually consumes the survey data that was produced during the execution of process instances. The operational insights and data from the National Family Health Survey India report detailed in Healthcare needs of the population, Forbes Advisor INDIA. Top Health Insurance Statistics Of 2024 (*Maheshwari, 2024*) indicates that one family member has regular health insurance coverage in 41% of homes and between 2019 and 2021, just 30% of women and 33% of males between the ages of 15 and 49 were protected by insurance for health or finance programs. The lack of awareness, limited knowledge, and economic constraints are the primary factors impeding health consciousness. With keeping the awareness about Health insurance and utilization of healthcare services insight from Public Health Insurance Status and Utilization of Healthcare Services Across India (*Vaibhavi et al., 2024*).

Data for our study will be collected via survey (questionnaire supporting the healthcare insurance consumption process in effective method references from Challenges for Lower-Middle-Income Countries in Achieving Universal Healthcare: An Indian Perspective (*Meena G & Harvinder, 2023*) submitted through the secured network of employee engaged in operation through private as reviewed in Study on Virtual Private Network (*Karuna K & Indira B., 2023*) connection from regional offices (Bengaluru & Hyderabad) of company's private network, A VPN protects the private network, using encryption and other security mechanisms to confirm that only authorized users can access the system, and the data can be intercepted with no access to PHI/PII data but not limited to perform the study on research requirements. Valid responses collected from this survey questionnaire was utilized in performing analysis to support the concept cost benefits from effective communication with awareness about 'Nutritious food as medication' and 'Effective physical activities – Yoga' as detailed in literature review and research methodology. Also, government published data about healthcare insurance benefit consumption by public described in Public Health Insurance Status and Utilization of Healthcare Services Across India (*Vaibhavi et al., 2024*) has been citation as applicable to support the research study.

Internal survey mechanism through secured organization approved software (My team channel) utilized in data collection methods such as focus groups participating via common communication channel with responses to the survey questions as online interviews, only when the following conditions exist:

- (1) The individual is studied as a unit of analysis (Healthcare Insurance Consumer – employee in different age group from 2 cities – Bengaluru & Hyderabad).
- (2) Methodology for the development of a scale to measure attitude reviewed in Development of a Scale to Measure (*Sanjaya et al., 2016*) of the employee participating in the survey and contributes with valid responses for better analysis of the Quantitative Evaluation of the Public Medical and Health System Costs During Pandemic Governance: Investigation Based on COVID-19 (*Xintao Li., et al., 2022*) through strong process of mixed method (Qualitative & Quantitative) approach to support the study in greater coverage with references from The Growing Importance of Mixed-Methods Research in Health (*Sharada Prasad et al., 2022*).
- (3) Data need and understanding about cost benefits based on Healthcare Insurance Benefits consumption analyzed with the support of effect of health insurance program for the poor on out-of-pocket inpatient care cost in India: evidence from a

nationally representative cross-sectional survey (*Sriram & Khan, 2020*), supports increased insights with smart, efficient, and accurate information about the population categorized and reviewed in Healthcare needs of the population using report from Forbes Advisor INDIA, Top Health Insurance Statistics Of 2024 (*Maheshwari, 2024*). Responses captured as part of this session will have historical 2023 valid responses & 2024 valid responses help in performing the analysis about cost effectiveness (reduction in cost of insurance for 2024 benefits coverage) and area improvements (increased awareness on Food Medication supporting chronological health concerns, effective communication about physical activities conducted by the insurance providers).

- (4) Any challenge in access primary insurer data or lack of secondary data insights from Challenges for Lower-Middle-Income Countries in Achieving Universal Healthcare: An Indian Perspective (*Meena G & Harvinder, 2023*) because there is no secondary data about the established relationship between population from cities about culture orientation and awareness programs about ‘Nutritious food as medication’ and Eating and Healing, Traditional Food As Medicine (*Andrea & Lisa, 2006*) and Journal of Nutrition Education and Behavior (*Joda P. & Kaui G., 2003*) integrated with ‘Effective physical activities – Yoga’ study references from

Effectiveness of Workplace Yoga Interventions to Reduce Perceived Stress in Employees (*Elisabetta et al., 2020*) in India, supports the use of survey to obtain the required information is deemed appropriate for this research from Analysis of the Quantitative Evaluation of the Public Medical and Health System Costs During Pandemic Governance: Investigation Based on COVID-19 (*Xintao Li., et al., 2022*) and Mixed methods research in mental health nursing by J psychiatric Ment Health Nurse.

This intrinsic study through outcome from survey amongst member of healthcare insurance coverage consumers supported by employer program (*Employee Benefit- Paramount TPA*) located at Southern region of Indian Cities, Impact of public-funded health insurances in India on health care utilization and financial risk protection: a systematic review for Hyderabad (*Bhageerathy et al., 2021*), & Prevalence of catastrophic health expenditure and its associated factors details Bengaluru (*Swetha et al., 2020*). These cities were selected considering the nature of population consuming healthcare insurance from employer benefits and increased awareness about Healthcare Insurance support during crisis situations. Both are heavily populated capital cities of Southern region in India and both cities (

Awareness of health insurance in a rural population of Bengaluru, India (*Mangala & Arun, 2016*) and Exploration on Consumer's Perception and Buying Behavior of Health Insurance Policies in Hyderabad City (*Srimannarayana, 2019*) have dense population enrolled under Healthcare Insurance Coverage referenced in Public Health Insurance Status and Utilization of Healthcare Services Across India (*Vaibhavi et al., 2024*) through the employers and had huge impact during COVID-19. It is also major contributor to the Country's GDP growth through diversified revenue data from Healthcare needs of the population using report from Forbes Advisor INDIA, Top Health Insurance Statistics Of 2024 (*Maheshwari, 2024*) sector populated from all parts of India. With the selection of these locations, will have a spread across diverse population from across the country detailed about Cost-effectiveness of population-based screening for diabetes and hypertension in India: an economic modelling study (*Gunjeet et al., 2022*). Outcome from the employees with valid responses from each city supported in performing healthcare industry demanding analysis and prepare metrics represents best use of services (campaign conducted by HR operations about Food and Recipe, Exos team Fit5K program, Hydrate to operate et. al) provided by healthcare insurance provider and employer by engaging the associated in healthy lifestyle for better health detailed in Improving Eating Habits at the Office: An Umbrella Review of Nutritional Interventions, (*Aleksandra et al., 2023*).

The concept of well-being comprises health, happiness, and prosperity, including feeling mentally well, being satisfied with life, having a sense of purpose, and managing stress effectively when we follow the instructions established by the employer with the support of Healthcare insurance provider on ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’. Due to increased global health needs (staff shortages, challenges in obtaining healthcare services, aging population), for several years now, the World Health Organization has identified the workplace setting as crucial for health promotion. The average employee spends one-third of the day in the workplace; thus, measures taken just in this environment seem reasonable and relatively easy to implement. When undertaking activities to promote health at the workplace with support of respective HR operations, it is necessary to clearly define the target group, as well as the purpose and form of the activities (interventions) to be undertaken. Office workers are one of the most frequently addressed group of employee-directed health-related activities. The umbrella review comprised of list of systematic reviews of studies with mixed interventions, both cognitive and behavioral. The most common endpoints evaluating the effectiveness of the interventions were, as with behavioral interventions, the change in body weight or composition, consumption of specific foods, or the results of biochemical tests (e.g.,

glucose, total cholesterol, LDL, HDL, blood pressure). The interventions encompassed comprehensive programs including lectures (communication about nutritious food as medication) or workshops (Physical activities – Yoga), individual consultations with a specialist, coaching (cognitive interventions) and environmental interventions (changing the food menu in the employee cafeteria, labelling products to understand better about ingredients, changing the composition of products available in vending machines and access to fresh fruit and vegetables in the workplace), exercise programs, financial benefits (discounts on healthier products or a certain amount of money for reaching a goal set in the study), self-management interventions and other behavioral interventions. In recent years, an increase in overweight and obesity rates has been observed, especially after the COVID-19 pandemic. This is particularly noticeable among office workers with sedentary jobs which may contribute to the development of diseases of affluence such as diabetes or the metabolic syndrome. Therefore, the implementation of disease prevention programs in the workplace may improve employee health and help with cost effectiveness around insurance requirements. For practitioners, this will also enhance the quality of interventions and will help to achieve the optimal cost-effectiveness and cost-efficiency, making it easier to design customized intervention programs from which employees genuinely benefits on year over year insurance savings.

3.3 Research Purpose and Questions

Today across world, Healthcare Insurance Coverage insured by member consuming medical services for certain diagnosis associated to health issues (ex: diabetics - Diabetes Care in India: A Descriptive Study (*Jagannath V. & Shraddha Y, 2021*), blood pressure - Hypertension in India: a systematic review and meta-analysis of prevalence, awareness, and control of hypertension (*Raghupathy et al., 2014*) demands for continuous (step therapy) medication as per medical provider consultation in limitation to health insurance coverage referenced from Basic versus Supplementary Health Insurance: The Role of Cost Effectiveness and Prevalence (*Boone, 2014*) leads into,

- a) High cost of expenses to member as out of pocket applied to accumulation coverage until cost-of-service claims reaching the plan maximum benefit limits, Importance of Evidence-Based Health Insurance Reimbursement and Health Technology Assessment for Achieving Universal Health Coverage and Improved Access to Health in India, (*Amit et al., 2021*) - The out-of-pocket (OOP) healthcare expenditure in India is among the highest in the world. This situation is despite the implementation of numerous government health schemes and the availability of many health insurance programs, both public and private. Compromised quality of

care in many public healthcare facilities is a major factor driving the average Indian citizen to increasingly depend upon private healthcare facilities, further escalating OOP spending. The low awareness and poor uptake of insurance policies among Indians is one of the biggest challenges in the implementation of universal health coverage (UHC) in India. The catastrophic burden of high OOP expenses on individual households could be reduced by taking steps to enhance health insurance uptake, which can be in turn achieved by strengthening the healthcare reimbursement system in India.

The same questionnaire submitted to the employers in 2023 & 2024 helped us to understand and evaluate the mindset of insurance consumers. Supporting them with required awareness program from respective departments from Healthcare Insurance organizations and Employer HR team will help with cost effectiveness in insurance coverage and studies reference in literature represents same experience referenced in Importance of Evidence-Based Health Insurance Reimbursement and Health Technology Assessment for Achieving Universal Health Coverage and Improved Access to Health in India, (*Amit et al., 2021*) - *The enactment of health schemes such as Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana and setting*

up of Health Technology Assessment in India are steps toward reducing OOP expenditure and achieving UHC in India.)

b) Long term medication (lifetime for blood pressure & diabetics) process for patients impacts various organs. Learning from ‘Food as medicine? Exploring the impact of providing healthy foods on adherence and clinical and economic outcomes’- (*Aleda et al., 2022*). Chronic disease prevalence is increasing. Adherence to dietary guidelines is low (<50%) despite positive impacts in disease progression, clinical outcomes, and medical costs. It is important to summarize the impact of providing medically tailored meals to patients on adherence rates, clinical outcomes, and potential economic outcomes helps in handling the long-term medication efficiently and eliminate the prescription as long-term goal.

Health in Food Systems Policies in India: A Document Review (*Adithya et al., 2021*) - We found some evidence of concern for health, and inclusion of health ministry in food policy documents in India. The ongoing and planned intersectoral coordination to tackle undernutrition could inform actions to address other relevant but currently underappreciated concerns such as NCDs.

Survey resulted in evidencing the above referential studies and helped us in arriving at a decision with recommendation around effective communications models using

technologies referenced in Applying Mobile Technology to Sustain Physical Activity After Completion of Cardiac Rehabilitation: Acceptability Study (*Abdelaziz et al., 2022*) - technology use served as a reminder to be physically active, recommendations for technology to improve user experience, and desire for personal feedback. Themes below can be implanted for supporting the insurance consumer participating in long term medication,

- ✓ Technology use increased motivation for physical activity.
- ✓ Technology use served as a reminder to remain physically active.
- ✓ Recommendations for technology to improve user experience.
- ✓ Desire for personal feedback

c) Insurance provider will end up providing more claims coverage above and beyond benefits plan (premium) sold for insurer once the coverage for members maximum out of pocket is met through medication services in a calendar year. Introducing Nutritious Food Medication (*Sebi, 2020*) Dr. Sebi Treatment and Cures & Physical Exercises (eg: Yoga - (*Sachin Kumar et al., 2022*)) through health insurance coverage invariably gives significant positive impact on cost saving benefits (*Taylor, 2018*) for insured members with cost reduction by limiting 3

doctor office visits and gradual reduce pharmacy prescriptions by practicing the nutritious food intake (*Blair & Paolo, 2020*) & physical exercises (*Denise et al., 2023*), also establishing this program helps healthcare insurance provider (payer) in minimal consumption of plan benefits coverage by increasing the duration of reaching maximum cost allocated benefits (such as maximum deductible, maximum member out of pocket) for full plan coverage on cost of services. Study from 'Impact of public-funded health insurances in India on health care utilization and financial risk protection: a systematic review' (*Bhageerathy et al., 2021*) - India has a complex and mixed healthcare framework with presence of parallel public and private healthcare systems, it is estimated that, in India, around 71% of the healthcare spending is met by OOPE. This not only is an immediate financial burden to the poor households but also pushes the households into a never-ending poverty trap.

The survey results from participants in 2023 & 2024 was evident that an encouraging method as discussed by *Joda P., et al., 2003* in '*Journal of Nutrition Education and Behavior, Lessons Learned From the Spend Less, Eat Well, Feel Better Program Efficacy Trial*' - method in operation with healthcare insurance consumers will support their participation on programs helping progressing the

study ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ in cost effectiveness direction, especially the outcome observed that the short-term economic costs of COVID-19 for ordinary people had been enormous, with this suggestions around Cost-Benefit Analysis Indicates the Positive Economic Benefits of the Expanded Food and Nutrition Education Program (*Radhika et al., 2002*).

This study intends to work with a group of key stakeholders located in India (healthcare insurances consumers) through surveys questionnaire submitted via team communication channel – *Harvard and Public Health Insurance Status and Utilization of Healthcare Services Across India (Vaibhavi et al., 2024)* carry the required reference in conducting the semi-structured interviews (*Roosa et al., 2018*) and Prevalence of catastrophic health expenditure and its associated factors, due to out-of-pocket health care expenses among households with and without chronic illness in Bengaluru, India (*Swetha et al., 2020*) to identify the factors that promote and inhibits ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ for utilizing healthcare insurance more effective with cost benefits by reducing the out of pocket expense from member with healthy lifestyle of living using natural source of products studies in Improving Dietary Zinc Bioavailability Using New Food Fortification Approaches: A Promising Tool to

Boost Immunity in the Light of COVID-19 (*Marouance et al., 2023*). It also intends to reach out to insurance consumer follow and track the medication record from 2023 & 2024 for comparison study to support the analysis and include appropriate response in survey question. Data from both years of employee's participated by submitting the responses reliable and accurate considered as part of this assessment process. Universal Health Coverage in India: Progress achieved & the way forward (*Sanjay & Habib, 2018*) supports continuous study to examine the relationship between Health Insurance Sector & Consumer culture and Utilization/Awareness about of 'Nutritious food as medication' and 'Effective physical activities – Yoga' referenced in National Health Protection Scheme (*Roosa et al., 2018*) -Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana, or PM-JAY, which allows them to also get cashless secondary and tertiary care at private facilities, In collaboration with Nishali Patel, Policy Fellow, International Health Systems, London School of Economics for a New India-2022. The deep dive study using mixed method (qualitative & quantitative) approach with research design: qualitative, quantitative, and mixed method approaches (*Cresswell, 2011*) positioning in relation to the research question and chosen methodology; case study, PAR, visual and online methods in qualitative research; qualitative and quantitative data analysis software; and in quantitative methods more on power analysis to determine sample size, and more coverage of experimental and

survey designs; and updated with the latest thinking and research in mixed methods introduced innovative way of communication method as per Digital health application integrating wearable data and behavioral patterns improves metabolic health (*Ashkan et al., 2024*)- The effectiveness of lifestyle interventions in reducing caloric intake and increasing physical activity for preventing Type 2 Diabetes (T2D) has been previously demonstrated. The use of modern technologies can potentially further improve the success of these interventions, promote metabolic health, and prevent T2D at scale. Heart rate as an objective measure of physical activity, this real-world study demonstrates that use of digital technology in combination with CGM can facilitate lifestyle interventions that yield improvement in glycemic measures, in the largest cohort to date. Physical activity also lowers glucose levels, and the participants in the SOM program demonstrated increased physical activity as measured both by self-report (logging) and by an objective measure (HR > 110 bpm).

As such, the respondent of this study will be business owners.

Questions Posted to the stakeholders participated in survey:

- ✓ **Food as Medicine** - Does Health Insurance have coverage for "Culinary medicine"? Yes/Need Improvement/Not Aware
- ✓ **Food as Medicine** -Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions? Yes/No/Limited/Not Tracked
- ✓ **Food as Medicine** - Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels? Yes/No/Not Always
- ✓ **Food as Medicine** - Have 'food be thy medicine and medicine be thy food' communication from Healthcare Insurance helped in cost benefits? Yes (Switched from Low Ded-High Prem to High Ded-Low Prem)/No
- ✓ **Yoga (Physical Activities)** - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities? Yes/No/Limited Awareness

Additional Questions:

- ✓ The right foods can help keep me healthy and prevent me from suffering certain health problems, Yes/No/Not Always?
- ✓ The right foods can be therapeutic and help alleviate certain health problems, Yes/No/ Limited Awareness?
- ✓ Eating the right food can be the best medicine, Yes/No/ Limited Awareness?
- ✓ I am willing to spend more for food that can act like medicine Yes/Need to Review/Not Interested

3.4 Research Design

This research study about designing the meta data by using the healthcare industry methodology in the form of responses by posting various questions associated to the concept. A mixed method from ‘The Growing Importance of Mixed-Methods Research in Health’ (*Sharada Prasad et al., 2022*) model was employed with two approaches (*Qualitative & Quantitative as per study - Research design: qualitative, quantitative, and mixed methods approaches*) to content analysis; namely (i) the framework method as described by Gale and colleagues (*Gale NK., et al., 2013*) *Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC Med Res*

Methodical). The framework method is a type of thematic analysis that facilitates the identification of relevant interpretation to describe the findings and was used because the breadth of study topics was large, stemming from diverse sectors. Approach helped contextualize the data from individual policy coverage from healthcare insurance pool of analyzed and (ii) Manifest content analysis, as described by *Hsieh HF., & Shannon SE., 2005* - Three approaches to qualitative content analysis. Qual Health Result was used to document mentioned specific advantages of the research context (Cost Benefits) and health coverage supported.

Data sources for the mixed method model of study will be extracted in the form of categorized metrics from the documented survey responses submitted by participants & available government published data as per Public Health Insurance Status and Utilization of Healthcare Services Across India (*Vaibhavi et al., 2024*) and Analysis of the Quantitative Evaluation of the Public Medical and Health System Costs During Pandemic Governance: Investigation Based on COVID-19 (*Xintao Li., et al., 2022*). The characteristics of the respondents such as age and gender were obtained separately with awareness that any other source of PII data will not be exposed in any forms.

The survey was developed with questionnaires categorized under two specific groups for preparing the effective metrics associated to awareness about Eating and Healing,

Traditional Food As Medicine (*Andrea & Lisa, 2006*) and Food as medicine - A bad diet's role—in cardiovascular disease, type 2 diabetes, and even some forms of cancer—contributes to one in every five deaths globally (*Ed Johnson et al., 2022*) and *Cost-effectiveness of population-based screening for diabetes and hypertension in India: an economic modelling study* (*Gunjeet et al., 2022*) supporting the theory of our research concepts 'Nutritious food as medication' and 'Effective physical activities – Yoga' as detailed about Effectiveness of Workplace Yoga Interventions to Reduce Perceived Stress in Employees (*Elisabetta et al., 2020*) and cost benefits analysis as referenced in 'Food as medicine? Exploring the impact of providing healthy foods on adherence and clinical and economic outcomes' (*Aleda et al., 2022*) supplement the research concept.

The survey questionnaire were posted to the participating population of the employee group through the organization supporting communication source (My Team) as categorized to collect the responses and prepare data supporting metrics against “Cost Benefits Awareness from - Food as Medicine” and “Cost Benefits Analysis from - Food as Medicine” as reviewed in literature in detail with conceptual methods - Awareness & Cost Effectiveness with usage of “Nutritious Food Medication & Yoga” (*Ed Johnson et al., 2022*) and Basic versus Supplementary Health Insurance: The Role of Cost Effectiveness and Prevalence (*Boone, 2014*). Besides, this research study to be diversified and visualized

at different perspectives of business strategies around healthcare coverage amongst the standard population (*Indian Council of Medical Research, 2023 - 101 million diabetics, the Indian Council of Medical Research (ICMR) in a new study which was published in the journal 'The Lancet Diabetes and Endocrinology', said India is home to a whopping 315 million people with hypertension, and 101 million with diabetes*), which will result in having a healthier understanding of this study phenomenon supporting all departments (payer, plan sponsor & consumer) engaged in the health insurance market.

Data analysis using the quantitative model of civic insights from the outcome of survey wires the demand to enhance communication models from healthcare insurance provider and the employer benefits for effective utilization of cost available through the insurance coverage detailed in *Changing paradigm of healthcare communications in India (Asawari, 2023)* supporting the quantitative data from community using the synergy from ‘The Growing Importance of Mixed-Methods Research in Health’ (*Sharada Prasad et al., 2022*) - Health researchers need to pay careful attention to the ‘best’ approach to designing, implementing, analyzing, integrating both quantitative (number) and qualitative (word) information and writing this up in a way offers greater insights and enhances its applicability. Enhancing the analysis of data through Multidimensional process analytics (MPA) augments business process analytics with the multidimensional perspective on the

analysis data. Classically, insurance coverage cost effectiveness business process analytics “is the family of methods and tools applied to these events streams to support decision-making among the population participated in this survey.

Data metric from the multidimensional approach supported in understanding evidence-based healthcare for reimbursement to healthcare consumers during the crisis situation requires the systematic assessment of all health technologies detailed in Importance of Evidence-Based Health Insurance Reimbursement and Health Technology Assessment for Achieving Universal Health Coverage and Improved Access to Health in India, (*Amit et al., 2021*) provides guidance to make decision for best use of cost (reduced out of pocket) while accessing the healthcare service and the major challenges for Lower-Middle-Income members enrolled under healthcare insurance. Also understanding about complementary therapy from Yoga practice enhances immunity and mental health referencing (*Sachin Kumar et al., 2022*) Perceptions about the Benefits and Negative Outcomes of Yoga Practice by Yoga-Naïve Persons: A Cross-sectional Survey. The average employee spends one-third of the day in the workplace as referenced in Improving Eating Habits at the Office: An Umbrella Review of Nutritional Interventions (*Aleksandra et al., 2023*) - Healthy Workplaces: A Model for Action for Employers, Workers, Policy-Makers and Practitioners. Survey data about improved awareness about the evaluation of

the effectiveness of workplace nutrition interventions is a crucial component of their implementation and the effectiveness of behavioral can be assessed using work environment using health-related indicators (e.g., BMI, glucose levels, cholesterol levels, disease exacerbation, consumption of specific food groups).

This study was to relate the metric from survey response and synthesize the available scientific evidence regarding the food as medicine and physical activities – yoga effectiveness of various workplace-based nutrition interventions for office workers consuming the healthcare insurance to make necessary decision about year over year coverage requirements have cost efficiency.

3.5 Population and Sample

This research study's population was epitomized within Healthcare Insurance Coverage consumers from workplace at private organization supporting services for Healthcare Insurance requirements across the country. Members participated in this survey span across various scales (Entry Associate, Associate, Sr. Associate, Associate Manager, Sr. Manager & Executive) of working in department at CGS, a private company from southern part (Bengaluru & Hyderabad) of India. This study to achieve its aim, purposive method by purposeful sampling for qualitative data collection and analysis in mixed method

implementation research (*Lawrence A. et al., 2016*) sampling was adopted from the population responses. In purposeful sampling, used judgment to pick respondents who could participate in both survey requirements constitutes between 2 years and provided reliable, constructive information required to address research theme targeting the audience of healthcare insurance market with the response and accomplish research goals. Data were synthesized using a Microsoft Excel matrix with adequate data mapping for metrics generation. Information on the nutrition interventions (awareness about food as medication and benefits of physical activities) helps in adherence to dietary guidelines is low (<50%) despite positive impacts in disease progression, clinical outcomes, and medical costs in each of the included studies was extracted and categorized within two categories (Consumer awareness on “Food as Medicine” and Cost benefits on “Food as Medicine”). Purposeful sampling is a technique widely used in mixed method research for the identification and selection of information-rich cases for the most effective use of limited resources

Qualitative research and evaluation methods (*Patton, 2002*) with quantitative methods (*Research design: qualitative, quantitative, and mixed method approaches - Creswell, 2011*) on power analysis using Microsoft worksheet to determine sample size. This involves identifying and selecting individuals or groups of individuals that are especially

knowledgeable about or experienced with a phenomenon of interest. Designing and conducting mixed method research, (*Cresswell, 2011*) Consider the message workplace nutrition interventions have garnered higher attention as a pivotal component of employee well-being and organizational productivity discussed in Improving Eating Habits at the Office: An Umbrella Review of Nutritional Interventions (*Aleksandra et al., 2023*) in relation to certain survey responses indirectly enforce decision making for benefits coverage need in future year. In relation to metrics from employee's, Current study on Health Trend report shared by world's leading insurance broker and risk advisor, Mercer Marsh, the cost of employer-sponsored medical benefits in India was expected to rise by 15%. (*Maheshwari, 2024*).

Eight hundred and twenty-four (**824**) individuals responses considered from survey participation who met all requirements by purposeful sampling. Purposive sampling is a form of non-probability sampling (*Lucy et al., 2006*) where the investigator of the research used as judgment for selecting members of the study population to participate in the study as described in Case Study Research and Applications: Design and Methods (*Yin, 2018*). Participant span table as below,

Age/Gender	Female	Male	Grand Total	# % of participation
<35	216	240	456	55%
35-40	128	211	339	41%
>40	4	25	29	4%
Grand Total	348	476	824	
# % of participation	42%	58%		

Table 3.1. Healthcare Insurance Consumer – Survey Participation Span

Views of healthcare professionals on gender roles: A qualitative study (*Zeynep et al., 2023*)

- Healthcare professionals should provide equitable services without discrimination. The

purpose of mixed method studies is to acquire an understanding of how people make sense

of their lives, outline the interpretation process, and express how people interpret their

experiences from B.S. Nobel Publishing on Qualitative Research: A Guide to Design and

Implementation (*Merriam & Jossey, 2018*). In similar, study added value of data analysis

using mixed method (*Anugraha et al., 2024*) a *People Perspective on Out-of-Pocket*

Expenditure for Healthcare: A Qualitative Study from Pune, India- Numerous quantitative

studies have been done to assess OOPE in general as well as for specific diseases. It is

desirable to assess awareness, sources of information about government assistance and

insurance schemes, and the reasons behind their non-utilization. This equitable care they

provide will positively affect the health of individuals and in the study, the Standards for Reporting Qualitative Research (SRQR) criteria proposed for qualitative studies were followed from standards for reporting qualitative research (*Bridget et al., 2014*).

3.6 Participant Selection

This part of the study talks about the approach considered and progressed with important model consists of 2 semi-structured interview conducted in Aug-2023 & Aug-2024 with survey questions categorized under “Cost Benefits Awareness from - Food as Medicine” and “Cost Benefits Analysis from - Food as Medicine” to perform study on the cost effectiveness as reviewed in all section of this research ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’. Team participated in this course of survey has plan year benefits coverage consumption & awareness about the cost benefits based on several session conducted by the employer organization about ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ as part of behavioral coverage enrolled under Healthcare Insurance. The interview conducted is confidential and allow research participants to answer confidently through the survey response (*Sanam Roder et al., 2020*) level of confidence in and endorsement of the health system among internet users in 12 low-income and middle-income countries. An advance communication was shared with

participants to solicit their response for survey questionnaire submitted through internal communication software.

In mixed method case study design, as researcher of this thesis study focus on selecting respondents was critical and they can express viewpoints related to the research questions to achieve data satisfaction as per strategies and methodologies conducted as part of this research to enhance business results supporting all parties of insurance users and to ensure an overlap of data to achieve the objectives of this study from standards for reporting qualitative research (*Bridget et al., 2014*) and as researcher in this study, identifying the appropriate type of meaningful insights to gain a better understanding of specific questions and improve problems encountered by people in life in healthcare industry as referenced in Use of qualitative research in the field of health (*Chung, 2008*) with public references in addressing financial concerns of individual households with Knowledge, Coverage and Usage Patterns of Health Insurance in Rural South India (*Rahul Hegde et al., 2020*) - Out-of-pocket payments by individual households are the main source of health care financing in India).

Being in the healthcare insurance field, mixed method (qualitative & quantitative) research was conducted on topics considering its characteristics and strengths through purposeful sampling, a limitation was expected as the researcher but determined in gathering the quality sample out of the collection and not capture the entire essential to fully explore the study questions using purposeful sampling for qualitative data collection and analysis in mixed method implementation research (*Lawrence A. et al., 2016*) Nevertheless, these research participants were intentionally selected considering intimate knowledge about healthcare industry and awareness about of the organization being the plan sponsor and the association's success history.

India is a home to many lifestyle diseases such as heart strokes, diabetes and many respiratory diseases. All these ailments are very much treatable in India but treatment costs is sky-rocketing (*Maheshwari, 2024*), and A progress seen in employer-sponsored health insurance simply means that the large number of workers or employees have been covered in the country under a health insurance coverage which tends to provide them with safety and security at the hour of need. Research participants had adequate health insurance coverage from employer directive organization and have good tracking about comprehensive insurance policy cover critical illness, personal accident and all the pre-

existing health conditions such as blood pressure, diabetes, asthma., also engaged in health care programs (*Elisabetta et al., 2020*) conducted as part of employer benefits.

3.7 Instrumentation

Data collection from the participants obtaining the essential details of the study phenomenon, and it includes observing the participants' feelings, emotions, and thought processes as supported on purposeful sampling (*Lawrence A. et al., 2016*) for qualitative data collection and analysis in mixed method implementation research and Epidemiology sits strongly in the quantitative research corner, with a strong emphasis on large data sets and sophisticated statistical analysis. Although the use of mixed methods in health research has been discussed widely by researchers about the explanation of why and how mixed methods are used in a single research question using the study from ‘The Growing Importance of Mixed-Methods Research in Health’ (*Sharada Prasad et al., 2022*). The data was extracted through primary source (survey question responses through the organization internal communication process) as directed topic supporting the categories from literature study. Mixed methods of research has been used for diverse sub-topics, including the experiences of employee & family with respect to various diseases (such as cancer, myocardial infarction, chronic obstructive pulmonary disease, depression, falls,

and dementia), awareness of treatment for diabetes and hypertension, the experiences of physicians and nurses when they come in contact with medical staff, awareness of community health environments, experiences of medical service utilization by the general public in medically vulnerable areas, the general public's awareness of vaccination policies, the health issues of people with special types of employment. Qualitative research in healthcare: necessity and characteristics (*Pyo J. et al., 2023*) supports in understanding the design of the questionnaire was based on research study and deep review of the literature references and previous studies. The questionnaire captures all required aspects of the conceptual framework while at the same time providing insights about cost benefits aspects from the analysis of 'Nutritious food as medication' and 'Effective physical activities – Yoga' to handle financial crisis and due to the increase in lifestyle changes and rising healthcare costs (*Anugraha et al, 2024*), having health insurance coverage becomes more of a necessity than a luxury (*Maheshwari, 2024*).

The Survey questionnaire utilized in this study has been divided into two parts, The first part will concentrate on general awareness information about the Healthcare Insurance & Coverage, including awareness about food as medicine detailed in Eating and Healing, Traditional Food As Medicine (*Andrea & Lisa, 2006*), value of self-medication as subjected in the value of self-medication: summary of existing evidence (*Taylor, 2018*) and

Yoga is a common approach to manage stress and its effectiveness has been extensively confirmed with Yoga interventions carried out at workplace on work-related stress among employees about Effectiveness of Workplace Yoga Interventions to Reduce Perceived Stress in Employees (*Elisabetta et al., 2020*).

The next section of the questionnaire focused on obtaining information supports to perform the analysis on cost effectiveness and benefits (saving & avoidance) on healthcare coverage from Insurance provider to consumer as detailed in Registered Dietitians Effective in Dyslipidemia (*Geeta et al., 2018*) - Clinical and Cost Benefit of Medical Nutrition Therapy by Registered Dietitian Nutritionists for Management of Dyslipidemia: A Systematic Review and Meta-Analysis and Ayushman Bharat for a New India-2022.

Data collection was performed between Aug 2023 and Aug 2024 for performing mixed method analysis and generate trend metrics to support the effectiveness of the study.

3.8 Data Collection Procedures

The data for this research study constitute both historical and current facts about the Health Insurance Coverage by demographic characteristics, health insurance product orientations, along with benefits coverage from insurance provided, benefits, and number of consumers.

The survey questionnaire interview procedure was followed to maintain a safe and good relationship with the interviewees before, during, and after the interview period to build trust and collect accurate data between years (2023 & 2024). It is essential to highlight that one of the merits in conducting semi-structured interviews with focused research subject questions much helped in explore the lived experiences of the researched participants.

Purposeful sampling for qualitative data collection and analysis in mixed method implementation research (*Lawrence A. et al., 2016*), To avoid the imperfections of data collection that lose literal meaning or exposure to confidentiality infringement, the study was focused on gathering data and with adequate controls in place to establish a proper understanding and validity of the data collected. Case Study Research and Applications: Design and Methods (*Yin, 2018*) for data collection process must be explicit and as researcher tried keeping the data from publications on Government of India; Annual Report 2020-21 (*Insurance Regulatory and Development Authority of India, 2022*) and (*Asawari, 2023*) as much as possible with user sources from the last 2 years (2023, 2024) that are

relative to the research study, and this ensured the reliability and generalizability of the study.

To organize the gathered data, used flexibility in deploying the questionnaire response data, and Microsoft technology was the primary tool used. The research used programs such as Microsoft Word, Excel, and computer-assisted qualitative data analysis software (CAQDAS) for ease of comparison, and all the data was coded, transcribed, interpreted, and summarized to present this study in respective formats (tables and figures).

3.9 Data Analysis

Productive study on this research was performed with the support of insightful data gathered and industry standard analysis such as mixed method research with the support of purposeful sampling for qualitative data collection and analysis in mixed method implementation research (*Lawrence A. et al., 2016*) was followed. As stated in our study, played key role as researcher in collecting and analyzing the data using purposive sampling method. The data collected through official one-on-one submission against the survey questionnaire through the organization channel of communication and performed analysis focusing on the research study cost effectiveness process by consumer of the healthcare coverage with categorizing the data against “Cost Benefits Analysis” & “Cost Benefits Awareness” (*Gale NK., et al., 2013*) Using the framework method for the analysis of qualitative data in multi-disciplinary health research. All collected data that will form the responses and direct observation will be multidimensional process analytics (*Rinderla-Ma et al., 2018*) approach supported the metrics preparation quantifying the theory of analysis about healthcare insurance consumption between years 2023 and 2024. There are three main steps involved in data analysis. Three approaches to qualitative content analysis, Qual Health Res (*Hsieh HF., & Shannon SE., 2005*) and The Growing Importance of Mixed-Methods Research in Health (*Sharada Prasad et al., 2022*), gathered the data through

Microsoft Team in which the survey was posted, manage and organize the data in the Microsoft worksheet, the analysis & metrics with graphs were prepared using Microsoft worksheet. The research transcribed the analyzed data into a Microsoft Word document. Data analysis in this study has additional focus about the supporting metrics as per the theory in research on insurance consumption in cities (Awareness of health insurance in a rural population of Bengaluru (*Mangala & Arun, 2016*) and Exploration on Consumer's Perception and Buying Behavior of Health Insurance Policies in Hyderabad (*Srimannarayana, 2019*)). Worked on converting the data from paper (responses in communication channel) into coded data by transforming into Microsoft worksheet metrics for Case Study Research and Applications: Design and Methods (*Yin, 2018*) and Qualitative research and evaluation methods (*Patton, 2002*) – mixed method study quality depends on withstanding the test of reliability and validity to support the theory of this research cost effectiveness analysis by categorizing the participants response between “Cost Benefits Awareness from - Food as Medicine” and “Cost Benefits Analysis from - Food as Medicine”.

To have a trustworthiness of data and the study, have ensured reliability and validity by addressing the four most essential components of dependability, transferability, credibility,

and conformability without any gender discrimination about views of healthcare professionals on gender roles: A qualitative study (*Zeynep et al., 2023*) and aligned the outcome of this analysis toward employer-sponsored health insurance simply means that the large number of workers or employees have been covered in the country under a health insurance coverage which tends to provide them with safety and security at the hour of need (*Maheshwari, 2024*). Reliability and validity of this study on cost effectiveness ideation to support healthcare insurance consumer was through mixed method study. Case Study Research and Applications: Design and Methods (*Yin, 2018*) and Research design: qualitative, quantitative, and mixed method approaches (*Cresswell, 2011*) always depend on quality withstanding the data analysis of reliability and validity. In a mixed method analysis, researchers can achieve reliability and validity by adhering to trustworthiness. Via member verification, transcript analysis, and data secured in multidimensional process of analysis (*Rinderla-Ma et al., 2018*). The use of member checks in organizational sources (not available outside secured network) helped to provide the data with consistency and added credibility. The study ensured that all the participants obtained a copy of the interviews' explanation to verify the results and make corrections where necessary.

3.10 Research Design Limitations

This research study has been conducted with facts that have been reviewed and verified as literature. All the assumptions documented during the development and analyzing phase of the research design process has been addressed with no direct or indirect impact to research completion. Design ethics, as used in thesis are as per expected code of conduct or norms that governs the researcher's behavior while conducting any form of study in this research referencing data utilized as Annual Report 2021-22 - Government of India (*National Health Authority, 2022*). Protecting the data within private network environment insights from the Study on Virtual Private Network (VPN), VPN's Protocols and Security (*Karuna K & Indira B., 2023*) considering the deep analysis was performed against data gathered through secured channel from the employee. As indicated by Marczyk, DeMatteo, and Festinger (2005), ethics considerations are very critical when human subjects are involved and, in this study, related to healthcare insurance coverage for live members were part of the research process. Ethical issues permeate each phase of the research process: from the research problem formulation to the dissemination of the result referenced from Annual Report 2021-22 - Government of India (*National Health Authority, 2022*). Central to research ethics are the protection of the human participants/respondents, doing no harm to the respondents, and being fair in the selection of respondents and no exposure in health

records through any form of content in this research presentation. During this research as per organization policy must protect the privacy and dignity of the participants as explained in *Essentials of Research Design and Methodology (Marczyk et al., 2005)*. In this study, the participants' privacy has been protected as per PHI/PII and have ensured that the participants information provided about their business will not be made available to anyone who was not directly involved in the study. Additionally, all sources that will be used in this study are duly acknowledged.

3.11 Conclusion

The chapter kept the progression of study using mixed method analysis process and the rationale for using qualitative (theory-questionnaire) & quantitative (data-metrics) approaches with case studies as necessary to understand the intricacy of data usage and perform analysis to understand gaps of Cost Benefits Analysis: Nutritious Food as Medication and Effective physical activities – Yoga for insurance consumers covered under Healthcare Insurance coverage from the employer. The study helps in identify the focus of cost benefits with categorizing the effectiveness supports in directing benefits toward cost saving for members (employee) of healthcare consumer and increase business efficiency for healthcare insurance provider (payer) with cost avoidance.

The study in this chapter outlined methodology, research design, and research data supported through available channel with business case studies and reference materials to analyze methods in establishing effective and efficient model of communication methods with enhancement meeting industry standards for increased awareness about “Food as Medicine” & “Physical Activity – Yoga” one of the main theories of managing economic crisis for medication among the employer populations facing challenges due to Lower-Middle- income while accessing necessary Healthcare coverage.

Healthcare Insurance Coverage availability during the crisis management is widely presented as part of the literature review in this study and approaches including the topics supports various methods currently in study and already implemented realizing better results. Consuming the healthcare insurance coverage with preventive health measures based on Utilization, Motivators, and Barriers among population for insurance consumers provide solid evidence for cost effective model of operations support all parties of healthcare insurance service. However, some of the key competencies such as enhanced communication methods as emerging technologies in world market accessibility and consumption through digital health applications integrating with behavioral health improving patterns and awareness about programs with decision making are in common as

the study was focused and emphasis the importance of reliability and validity of healthcare insured member checking and conducting analysis for effective utilization of the coverage in Multidimensional Process Analytics.

The next chapter introduces the outcome increased use of ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ obtained from the research on the importance of better consumption helps in cost effectiveness and the implications with Lower-Middle-Income society of the country.

CHAPTER IV:

RESULTS

Introduction: Chapter III discussed all preferred methodology, design, and data collection for this research study and emphasized the importance using multidimensional methodology to validate the research findings. This chapter presents outcome from data analysis resulted in metrics and recommendation as observation with the support of research participants responses of the study focused on resounding data elements. The data from participants (employee with healthcare insurance coverage) was obtained through questionnaire through survey and direct observations from discussion as extended validation.

The metric supported observations as area improvement with Healthcare Insurance provider and Employer supporting employee with insurance programs for enrollment, both are in aligned with the literature of this study to address. For the mixed method case study, the overarching research issue was to understand the awareness about ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ support in cost saving & cost avoidance with healthier lifestyle supports efficient way to handle crisis management.

In reference to methodologies discussed in chapter III, focused responses through survey questionnaire from research study participants falling under various employee segments located in southern cities of India (Bengaluru & Hyderabad) categorically analyzed to understand the Cost-effectiveness of population-based screening in India for an economic modelling study supports employee with cost savings and enable cost avoidance for insurance provider. Cost-effectiveness of population-based screening for diabetes and hypertension in India: an economic modelling study (*Gunjeet et al., 2022*).

4.1 Research Question One

Are the Healthcare Insurance Consumer have awareness about consuming right food and physical activities (Yoga) serve as best medicine?

As mentioned in the methodology chapter, the detailed study used questionnaire loaded survey model supporting the aim of ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ study with increased model of awareness and benefits understanding from Cost-Benefit Analysis Indicates the Positive Economic Benefits of the Expanded Food and Nutrition Education Program Related to Chronic Disease Prevention (*Radhika et al., 2002*) and Digital health application integrating wearable data and behavioral patterns improves metabolic health (*Ashkan et al., 2023*) effective process in creating awareness as

detailed in the study, it constituted of data from 2024 responses (with overall ~23% increase in “Yes” from 2023 under the awareness category).

Variable	% (Yes)	N
Food as Medicine - Does Health Insurance have coverage for "Culinary medicine"?	68%	824
Food as Medicine -Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions?	71%	824
Food as Medicine - Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels?	85%	824
Yoga (Physical Activities) - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities?	89%	824

N – number of participants

As researcher in this study, utilized mixed method multiple case studies to strengthen the results from data analysis and assemble more preceptions in multidimensional view with accuracy to the results,

Table 4.1. Response summary detail (2024) for Food as Medicine - Does Health

Insurance have coverage for "Culinary medicine"?

	Need Improvement	Not Aware	Yes	Grand Total
Female	26	62	260	348
<35	10	5	201	216
35-40	12	57	59	128
>40	4			4
Male	44	132	300	476
<35	11	51	178	240
35-40	8	81	122	211
>40	25	-	-	25
Grand Total	70	194	560	824

Creating awareness by the Healthcare Insurance provider and Employer strengthened the need of benefits coverage for employee's and supported in taking decision towards cost saving approaches. This data analysis supported in multidimensional outputs,

- ✓ “Yes” response for the survey questions increased by **19% (155 members)** against 2023 data facilitates to recognize that employee's have admitted culinary medicine awareness by healthcare insurance coverage supports in cost efficiency. Effect of an Intensive Food-as-Medicine Program on Health and Health Care Use (*Joseph et al., 2023*).

India has described policy aspects addressing nutritional implications of specific foods (eg, fruits, vegetables, and trans-fats), and identified opportunities to tackle the double burden of malnutrition. This research thesis attempts to deepen the understanding on how health concerns and the role of the health sector are addressed across food systems policies in India detailed about Health in Food Systems Policies in India: A Document Review (*Adithya et al., 2021*).

The review emphasises the imperative for additional investigations that utilise evidence-based approaches to formulate sound guidelines for efficacious nutrition interventions in occupational settings analyzed in Improving Eating Habits at the Office: An Umbrella Review of Nutritional Interventions (*Aleksandra et al., 2023*).

Table 4.2. Response summary detail (2024) for Food as Medicine - Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions?

	Limited	Not Tracked	Yes	Grand Total
Female	22	62	264	348
<35	10	5	201	216
35-40	12	57	59	128
>40	-	-	4	4
Male	19	132	325	476
<35	11	51	178	240
35-40	8	81	122	211
>40	-	-	25	25
Grand Total	41	194	589	824

Nutrition awareness is a fundamental component of public health, and in a diverse and populous country like India, it takes on particular significance. India's rich cultural tapestry is reflected in its culinary traditions, but it also presents unique challenges when it comes to ensuring that everyone receives adequate nutrition. In recent years, there has been a growing recognition of the importance of nutrition awareness in India. This article explores the state of nutrition awareness in the country, its significance, and the efforts being made

to enhance it as summarized in *Fostering Nutrition Awareness in India: A Path to a Healthier Nation and Nutrition Specialist Diet Consultant Empowering Healthy Lifestyles (Naina, 2022)*.

Increased awareness through multiple channels accessible to the insured members in amplified process about the benefits by the Healthcare Insurance provider and Employer advocated in making cautious judgment towards electing right benefits coverages supports employee's with cost saving. Data analysis at this section supported in multidimensional outputs shows that,

- ✓ “Yes” response for the survey questions increased by **7% (54 members)** against 2023 data facilitates to acknowledge that employee's with increased awareness through effective communication channels on healthier diet helps prevent and treat the most common of these debilitating conditions at the financial crisis situations.

By applying a wearable activity tracker, mobile phone app, and push messages, our study showed strong potential for the adoption of new technologies by older adults to maintain physical activity as discussed in *‘Applying Mobile Technology to Sustain Physical Activity After Completion of Cardiac Rehabilitation: Acceptability Study’*, (*Abdelaziz et al., 2022*).

Table 4.3. Response summary detail (2024) for Food as Medicine - Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels?

	Not Always	Yes	Grand Total
Female	30	318	348
<35	7	209	216
35-40	22	106	128
>40	1	3	4
Male	96	380	476
<35	58	182	240
35-40	32	179	211
>40	6	19	25
Grand Total	126	698	824

(Awareness, use and understanding of nutrition labels among adults from five countries- (Rachel B., et al., 2022))

Although displaying nutrition information is already mandatory in India, a study showed that Indians seldom use this information for making food choices as limited general and nutrition literacy mean understanding of the text-intensive nutrient information is difficult. However, this also shows that symbols on food labels (e.g., vegetarian, and non-vegetarian

symbols) have better uptake and recall value. Therefore, it might be beneficial for front-of-pack labelling in India to be symbol based, with food images, logos, and health benefits.

- ✓ “Yes” response for the survey questions increased by **18% (146 members)** against 2023 data atmosphere voiced that employee’s getting attention about reading ingredients published in the pack labelling carries message about healthier diet requirements through all potential communication accessibilities supports in right consumption of packed food and food materials.

To be effective, front-of-pack symbols must be a part of the principal display panel and should have appropriate symbol-to-text ratio specifications. Mandatory front of pack labelling must be preceded by strong research and in a format that is understandable and acceptable to all learning from Front-of-pack nutrition labelling in India (*Richa & Bharathi, 2020*).

Table 4.4. Response summary detail (2024) for Yoga (Physical Activities) - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities?

	Limited Awareness	Yes	Grand Total
Female	40	308	348
<35	40	176	216
35-40	-	128	128
>40	-	4	4
Male	51	425	476
<35	51	189	240
35-40	-	211	211
>40	-	25	25
Grand Total	91	733	824

Yoga is a psycho-somatic approach that increases physical, mental, emotional and spiritual strength, and connection. Yoga practice enhances innate immunity and mental health, so it can be used as complementary therapy in the COVID-19 treatment, namely the post-COVID-19 condition. (YOGA for COVID-19: AN ANCIENT PRACTICE FOR A NEW CONDITION – A LITERATURE REVIEW, (*Denise et al., 2023*))

- ✓ “Yes” response for this suvery questions increased by **48% (398 members)** against 2023 data supplemented that connecting insurance consumers by healthcare insurance payer and plan sponsor (Employer) about the physical activiy sessions directed at employer premisis and outreach programs in society through every single communication sources helped insured members & family practicing healthy lifesytle in increased cost on common health concerns caused due to blood glucose & blood pressure could be circumvented.

A valuable setting to perform these activities is the workplace and one of the most adopted methods is represented by Yoga interventions carried out at workplaces directly, as part of corporate wellness programs. The synthesis of the available evidence and its quantitative analysis prove the effectiveness of Yoga interventions carried out at workplaces in decreasing perceived stress among employees on Effectiveness of Workplace Yoga Interventions to Reduce Perceived Stress in Employees (*Elisabetta et al., 2020*).

4.2 Research Question Two

Have the awareness about consuming right food and physical activities (Yoga) help with cost effectiveness?

This study aims to examine the cost benefits analysis with healthcare insurance market between Healthcare Insurance Coverage provider & Consumer culture based on Utilization/Awareness about of Natural Food & Physical Activities (with ~41% increase in “Yes” from 2023 under the awareness category).

Variable	% (Yes)	N
Food as Medicine - Have ‘food be thy medicine and medicine be thy food’ communication from Healthcare Insurance helped in cost benefits, Yes/No?	72%	824

N – number of participants

A region-specific (urban and rural parts of north, east, west, and south India) systematic review and meta-analysis of the prevalence, awareness, and control of hypertension among Indian patients about systematic review and meta-analysis of prevalence, awareness, and control of hypertension (*Raghupathy et al., 2014*).

The first short presentation concerns the effects of endurance exercise training on cardiovascular fitness, and how it relates to improved health outcomes. The second short section contemplates emerging molecular connections from endurance training to mental health. Finally, approximately half of the remaining review concentrates on the relationships between type 2 diabetes, mitochondria, and endurance training as described Health Benefits of Exercise (*Gregory N., et al., 2018*).

The attention of the principles of evidence-based healthcare for healthier life model within healthcare insurance consumers with all healthcare technologies and enactment of health schemes such as Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana as represented in National Health Protection Scheme (*Roosa et al., 2018*) and setting up of Health Technology Assessment in India are steps toward reducing OOP expenditure for employees to handle economic crisis.

Table 4.5. Response summary detail (2024) for Food as Medicine - Have ‘food be thy medicine and medicine be thy food’ communication from Healthcare Insurance helped in cost benefits?

	Yes (Switched from Low Ded- High Premium to High Ded-Low Premium)		Grand Total
	Limited		
Female	96	252	348
<35	38	178	216
35-40	58	70	128
>40	-	4	4
Male	138	338	476
<35	50	190	240
35-40	83	128	211
>40	5	20	25
Grand Total	234	590	824

*** Example Healthcare Insurance Plan Types:**

- *Low Ded- High Premium => Member pay 10% deductible for cost of medical visit with high monthly premium (ex: Rs 15,000 per month)*
- *High Ded- Low Premium => Member pay 30% deductible for cost of medical visit with low monthly premium (ex: Rs 12,000 per month)*

(Improving Eating Habits at the Office: An Umbrella Review of Nutritional Interventions, (Aleksandra et al., 2023)) - Measures resulted from the peculiarities of the US healthcare system, which does not entail public health insurance coverage; thus, healthcare costs are passed on to citizens and employers. Initially, the implementation of well-being and health programs (e.g., as part of Employee Assistance Programs) aimed to prevent work-related illness and accidents.

- ✓ “Yes” response for this suvery questions increased by **41% (335 members)** against 2023 data augmented that attention seeking methods in communication models with members of Healthcare Insurance Coverage through employment in diverse society on ‘*food be thy medicine and medicine be thy food*’ provides a greater insight in making right decision on electing required benefits plans that provides adequete coverage with cost effectiveness (saving & avoidance).

Challenges for Lower-Middle-Income Countries in Achieving Universal Healthcare (Meena G & Harvinder, 2023) - Over the years, there have been significant efforts invested by the policymakers in strengthening the infrastructure for healthcare delivery, resulting in significant successes and improvements in health outcomes; however, these efforts need to be intensified further to cater to the rapidly increasing population

4.3 Summary of Findings

In this Results Review, lots of attention gained by the Healthcare Insurance Consumers about the awareness program communication strategy on “Food as Medication” and “Physical Activity-Yoga” as responded properly (*Vilasini & Smita, 2023*)- Navigating the New Normal with Focus on Healthcare Accessibility, Innovation and Sustainability. Also, it helped in building trust within the crisis impacted society as reviewed in the value of self-medication: summary of existing evidence (*Taylor, 2018*) on Healthcare Insurance Coverage insight about the ‘Nutritious Food Medication & Yoga. As researcher analyzed with comparative study supporting multiple cases to strengthen assessment as part of the thesis through the documented survey response results (***“Yes” increased by ~25% from 2023 to 2024***) and deliver more understand on the results.

Multidimensional process analytics (MPA) augments business process analytics with the multidimensional perspective on the analysis data. The latter is typically event data that is produced during the execution of process instances. Classically, business process analytics “is the family of methods and tools that can be applied to these events streams in order to support decision-making in organizations” (*Rinderla-Ma et al., 2018*)

Multidimensional Process Analytics.

Table 4.6. Response summary assessment study (2024 vs 2023) for Food as Medicine -

Does Health Insurance have coverage for "Culinary medicine"?

2024:

	Need Improvement	Not Aware	Yes	Grand Total
Female	3.16%	7.52%	31.55%	42.23%
<35	1.21%	0.61%	24.39%	26.21%
35-40	1.46%	6.92%	7.16%	15.53%
>40	0.49%	0.00%	0.00%	0.49%
Male	5.34%	16.02%	36.41%	57.77%
<35	1.33%	6.19%	21.60%	29.13%
35-40	0.97%	9.83%	14.81%	25.61%
>40	3.03%	0.00%	0.00%	3.03%
Grand Total	8.50%	23.54%	67.96%	100.00%

	Need Improvement	Not Aware	Yes	Grand Total
Female	26	62	260	348
<35	10	5	201	216
35-40	12	57	59	128
>40	4			4
Male	44	132	300	476
<35	11	51	178	240
35-40	8	81	122	211
>40	25			25
Grand Total	70	194	560	824

2023:

	Need Improvement	Not Aware	Yes	Grand Total
Female	8.01%	12.50%	21.72%	42.23%
<35	3.76%	6.80%	15.66%	26.21%
35-40	3.76%	5.70%	6.07%	15.53%
>40	0.49%	0.00%	0.00%	0.49%
Male	13.47%	16.87%	27.43%	57.77%
<35	4.25%	7.52%	17.35%	29.13%
35-40	6.19%	9.34%	10.07%	25.61%
>40	3.03%	0.00%	0.00%	3.03%
Grand Total	21.48%	29.37%	49.15%	100.00%

	Need Improvement	Not Aware	Yes	Grand Total
Female	66	103	179	348
<35	31	56	129	216
35-40	31	47	50	128
>40	4			4
Male	111	139	226	476
<35	35	62	143	240
35-40	51	77	83	211
>40	25			25
Grand Total	177	242	405	824

Body weight decreased in all groups, especially those who were overweight or obese. Healthy eating habits improved significantly, with reduced daily caloric intake and carbohydrate-to-calorie ratio and increased intake of protein, fiber, and healthy fats relative to calories descriptors in Digital health application integrating wearable data and behavioral patterns improves metabolic health (*Ashkan et al., 2024*).

A study on Health in Food Systems Policies in India says detailed insights are also available for measures towards food safety. However, several other relevant health concerns, such as obesity, cardiovascular disease (CVD), agricultural injuries, agrarian distress, and hazards of food wastes were not adequately addressed, despite being critical population health concerns. Food systems are at the heart of the 2030 Agenda for Sustainable Development. Food systems include all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities, including socio-economic and environmental outcomes (*Adithya et al., 2021*).

An effective & efficient communication model with increased awareness helped in addressing such concerns within the society belong to insured crowd based on 2024 data analysis.

Table 4.7. Response summary assessment study (2024 vs 2023) for Food as Medicine -

Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions?

2024:

	Limited Awareness	Not Tracked	Yes	Grand Total
Female	2.67%	7.52%	32.04%	42.23%
<35	1.21%	0.61%	24.39%	26.21%
35-40	1.46%	6.92%	7.16%	15.53%
>40	0.00%	0.00%	0.49%	0.49%
Male	2.31%	16.02%	39.44%	57.77%
<35	1.33%	6.19%	21.60%	29.13%
35-40	0.97%	9.83%	14.81%	25.61%
>40	0.00%	0.00%	3.03%	3.03%
Grand Total	4.98%	23.54%	71.48%	100.00%

	Limited Awareness	Not Tracked	Yes	Grand Total
Female	22	62	264	348
<35	10	5	201	216
35-40	12	57	59	128
>40			4	4
Male	19	132	325	476
<35	11	51	178	240
35-40	8	81	122	211
>40			25	25
Grand Total	41	194	589	824

2023:

	Limited Awareness	Not Tracked	Yes	Grand Total
Female	3.76%	10.80%	27.67%	42.23%
<35	2.43%	3.76%	20.02%	26.21%
35-40	0.00%	0.00%	0.49%	0.49%
>40	1.33%	7.04%	7.16%	15.53%
Male	4.73%	15.78%	37.26%	57.77%
<35	2.67%	4.25%	22.21%	29.13%
35-40	0.00%	0.00%	3.03%	3.03%
>40	2.06%	11.53%	12.01%	25.61%
Grand Total	8.50%	26.58%	64.93%	100.00%

	Limited Awareness	Not Tracked	Yes	Grand Total
Female	31	89	228	348
<35	20	31	165	216
35-40			4	4
>40	11	58	59	128
Male	39	130	307	476
<35	22	35	183	240
35-40			25	25
>40	17	95	99	211
Grand Total	70	219	535	824

In India, Out-of-pocket expenses accounts for about 62.6% of total health expenditure - one of the highest in the world. Lack of health insurance coverage and inadequate coverage are important reasons for high out-of-pocket health expenditures. To reduce out-of-pocket costs, insurance needs to cover all family members rather than restricting coverage to a specific maximum defined in effect of health insurance program for the poor on out-of-pocket inpatient care cost in India' (*Sriram & Khan, 2020*).

Most common debilitating conditions caused due to limited awareness about healthy food & tracking physical activities will have major impact for human system and improving the consciousness through the explosion of new technologies that enable continuous glucose monitoring and activity tracking, as well as the widespread use of smartphones as referenced in Digital health application integrating wearable data and behavioral patterns improves metabolic health (*Ashkan et al., 2023*), provides a unique opportunity to leverage these technologies to significantly enhance the efficacy and practicality of lifestyle interventions. Technology-enabled diabetes self-management approaches have gained traction, wearable devices log steps, minutes of activity, miles attained, and heart rate changes, as well as estimate calories burned and Continuous glucose monitors (CGM) are wearables that, via alarm features and real-time feedback to the user about glucose trends supports in current mechanical lifestyle.

Table 4.8. Response summary assessment study (2024 vs 2023) for Food as Medicine -

Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels?

2024:

	Not Always	Yes	Grand Total
Female	3.64%	38.59%	42.23%
<35	0.85%	25.36%	26.21%
35-40	2.67%	12.86%	15.53%
>40	0.12%	0.36%	0.49%
Male	11.65%	46.12%	57.77%
<35	7.04%	22.09%	29.13%
35-40	3.88%	21.72%	25.61%
>40	0.73%	2.31%	3.03%
Grand Total	15.29%	84.71%	100.00%

	Not Always	Yes	Grand Total
Female	30	318	348
<35	7	209	216
35-40	22	106	128
>40	1	3	4
Male	96	380	476
<35	58	182	240
35-40	32	179	211
>40	6	19	25
Grand Total	126	698	824

2023:

Row Labels	Not Always	Yes	No	Grand Total
Female	11.29%	28.16%	2.79%	42.23%
<35	6.80%	16.63%	2.79%	26.21%
35-40	4.25%	11.29%	0.00%	15.53%
>40	0.24%	0.24%	0.00%	0.49%
Male	15.78%	38.83%	3.16%	57.77%
<35	7.52%	18.45%	3.16%	29.13%
35-40	6.92%	18.69%	0.00%	25.61%
>40	1.33%	1.70%	0.00%	3.03%
Grand Total	27.06%	66.99%	5.95%	100.00%

Row Labels	Not Always	Yes	No	Grand Total
Female	93	232	23	348
<35	56	137	23	216
35-40	35	93		128
>40	2	2		4
Male	130	320	26	476
<35	62	152	26	240
35-40	57	154		211
>40	11	14		25
Grand Total	223	552	49	824

Indians seldom use this information for making food choices as limited general and nutrition literacy mean understanding of the text-intensive nutrient information is difficult. However, it also shows that symbols on food labels (e.g., vegetarian, and non-vegetarian symbols) have better uptake and recall value. Therefore, it might be beneficial for front-of-pack labelling in India to be symbol based, with food images, logos, and health benefits based on understanding from Front-of-pack nutrition labelling in India (*Richa & Bharathi, 2020*).

Many a times, as a packed food consumer being in busy scheduled lifestyle in Bengaluru & Hyderabad cities the priority is not given on the reading the ingredients (nutrition data) provided in the labels. This data provides an insight that huge population of employee's had limited focus and comprehensive model of communication provided good visibility for healthy lifestyle. It considered different symbols and nutrient profiling models and has proposed a format based on nutrient-level cut-offs derived using the recommended dietary allowances for Indians (described by the Indian Council of Medical Research). WHO recommendations will be considered when Indian-specific nutrient cut-off levels are not available as study Front-of-pack nutrition labelling in India (*Richa & Bharathi, 2020*) details.

Table 4.9. Response summary assessment study (2024 Vs 2923) for Yoga (Physical Activities) - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities?

2024:

	Limited Awareness	Yes	Grand Total
Female	4.85%	37.38%	42.23%
<35	4.85%	21.36%	26.21%
35-40	0.00%	15.53%	15.53%
>40	0.00%	0.49%	0.49%
Male	6.19%	51.58%	57.77%
<35	6.19%	22.94%	29.13%
35-40	0.00%	25.61%	25.61%
>40	0.00%	3.03%	3.03%
Grand Total	11.04%	88.96%	100.00%

	Limited Awareness	Yes	Grand Total
Female	40	308	348
<35	40	176	216
35-40		128	128
>40		4	4
Male	51	425	476
<35	51	189	240
35-40		211	211
>40		25	25
Grand Total	91	733	824

2023:

	Limited Awareness	Yes	No	Grand Total
Female	17.23%	16.50%	8.50%	42.23%
<35	11.53%	9.95%	4.73%	26.21%
35-40	5.70%	6.07%	3.76%	15.53%
>40	0.00%	0.49%	0.00%	0.49%
Male	22.21%	24.15%	11.41%	57.77%
<35	12.86%	11.04%	5.22%	29.13%
35-40	9.34%	10.07%	6.19%	25.61%
>40	0.00%	3.03%	0.00%	3.03%
Grand Total	39.44%	40.66%	19.90%	100.00%

	Limited Awareness	Yes	No	Grand Total
Female	142	136	70	348
<35	95	82	39	216
35-40	47	50	31	128
>40		4		4
Male	183	199	94	476
<35	106	91	43	240
35-40	77	83	51	211
>40		25		25
Grand Total	325	335	164	824

(Effectiveness of Workplace Yoga Interventions to Reduce Perceived Stress in Employees, - (Elisabetta et al., 2020)) - The synthesis of the available evidence and its quantitative analysis prove the effectiveness of Yoga interventions conducted at workplaces in decreasing perceived stress among employees, when compared to no-treatment. Nevertheless, these conclusions are based on a few studies with “some concerns” about methodological rigor and future studies are needed. Indeed, in order to define common characteristics of Yoga interventions (such as style, duration, volume, and frequency).

Effective way of communication & utilization of digital system capability within healthcare consumers are in limelight and our survey did respond in coherent to this insight. (Asawari, 2023) In India, empowering stakeholders in the healthcare ecosystem, including patients and consumers, is a top priority for health communication. Involving patients in healthcare decisions through various communication channels is key. Utilizing technology can help understand patients’ problems and needs, blurring the boundaries between healthcare professionals and patients while facilitating faster delivery of healthcare processes. Establishing a dialogue with patients allows healthcare professionals to determine their agreement or disagreement with diagnoses and treatments, ensuring a clear path to recovery.

Table 4.10. Response summary assessment study (2024 Vs 2023) - Food as Medicine -

Have ‘food be thy medicine and medicine be thy food’ communication from Healthcare

Insurance helped in cost benefits?

2024:

Row Labels	Limited Awareness	Yes (Switched from Low Ded-High Prem to High Ded-Low Prem)	Grand Total
Female	11.65%	30.58%	42.23%
<35	4.61%	21.60%	26.21%
35-40	7.04%	8.50%	15.53%
>40	0.00%	0.49%	0.49%
Male	16.75%	41.02%	57.77%
<35	6.07%	23.06%	29.13%
35-40	10.07%	15.53%	25.61%
>40	0.61%	2.43%	3.03%
Grand Total	28.40%	71.60%	100.00%

Row Labels	Limited Awareness	Yes (Switched from Low Ded-High Prem to High Ded-Low Prem)	Grand Total
Female	96	252	348
<35	38	178	216
35-40	58	70	128
>40		4	4
Male	138	338	476
<35	50	190	240
35-40	83	128	211
>40	5	20	25
Grand Total	234	590	824

2023:

Row Labels	Limited Awareness	No	Yes	Grand Total
Female	22.45%	6.67%	13.11%	42.23%
<35	12.01%	4.73%	9.47%	26.21%
35-40	10.19%	1.94%	3.40%	15.53%
>40	0.24%	0.00%	0.24%	0.49%
Male	31.55%	8.37%	17.84%	57.77%
<35	13.35%	5.22%	10.56%	29.13%
35-40	16.87%	3.16%	5.58%	25.61%
>40	1.33%	0.00%	1.70%	3.03%
Grand Total	54.00%	15.05%	30.95%	100.00%

Row Labels	Limited Awareness	No	Yes	Grand Total
Female	185	55	108	348
<35	99	39	78	216
35-40	84	16	28	128
>40	2		2	4
Male	260	69	147	476
<35	110	43	87	240
35-40	139	26	46	211
>40	11		14	25
Grand Total	445	124	255	824

Food as medicine? Exploring the impact of providing healthy foods on adherence and clinical and economic outcomes -(Aleda et al., 2022) - Providing medically tailored meals significantly increases dietary adherence above 90% and allows patients to realize significantly better chronic disease control. Through this, patients could experience fewer complications. Food-as-medicine programs are becoming increasingly common, and rigorous evidence is needed regarding their effects on health as per study from Effect of an Intensive Food-as-Medicine Program on Health and Health Care Use (Joseph et al., 2023) and response rate from survey clearly demonstrates that helping the healthcare coverage consumers drives on decision making on electing the right choice of coverage provides cost effectiveness model supports payer & employer with cost avoidance.

Performing this research study using purposeful sampling is widely used in mixed method research for the identification and selection of information-rich cases related to the phenomenon of interest. Although there are several different purposeful sampling strategies, criterion sampling appears to be used most commonly in implementation research using purposeful sampling for qualitative data collection and analysis in mixed method implementation research (Lawrence A. et al., 2016) and help in determining the focused discussion about approaches to support cost benefits analysis.

4.4 Conclusion

Healthcare Insurance Consumers (employers or insurers) in India will be benefited with the clinical approaches for blood glucose (diabetics) and blood pressure associated medications directly within quasi-market system, and better access to salient healthcare coverage for diabetics & blood pressure in minimal cost by consuming the nutritious food & physician exercises (Yoga) in the market. Equally important, organizational decisions in healthcare call for a careful marshaling of the evidence from food medication & physical exercise process on effective and evidence-based treatment will help the insurance provider organizations clearly need for critical review of treatment to reduce the risk factors of impacting organs and improve quality of health with low risk factors based on nutritious food consumption.

Both (insured members and insurance provider) would benefit from more transparent systems on cost sharing by integrating this Food Medication process & Physical Exercise procedures within benefits services lines communicated to members through all channels for common healthcare causes from blood glucose (diabetics) and blood pressure medications with hygienic medical services directly support healthy lifestyle and indirectly supports in economically for subsidiary services. This initiative in healthcare industry will develop and sustain better healthcare relationships for consumers and precious few steps

will built the trusted relationships that consumers demand with better benefits as return of investment for both insurer & insurance provider.

We have study demonstrating the outcome from members as response data expressing that mentoring and monitoring the insurance consumers with appropriate channels supporting in maintaining healthy life described in Digital health application integrating wearable data and behavioral patterns improves metabolic health (*Ashkan et al., 2024*) which supplements the consumers in India's healthcare complex system constitutes of mixture of both public and private entities availing insurance coverage but out of pocket (OOP) healthcare spending has been a great concern. With this efficient way of carrying better health supports in reduced out of pocket expenses enables users to switch the insurance coverage from "high-cost premium with less deductible" to "low-cost premium with high deductible" saving only premium payment and less inhouse hospital expenses through out of pocket.

CHAPTER V: DISCUSSION

5.1 Discussion of Results

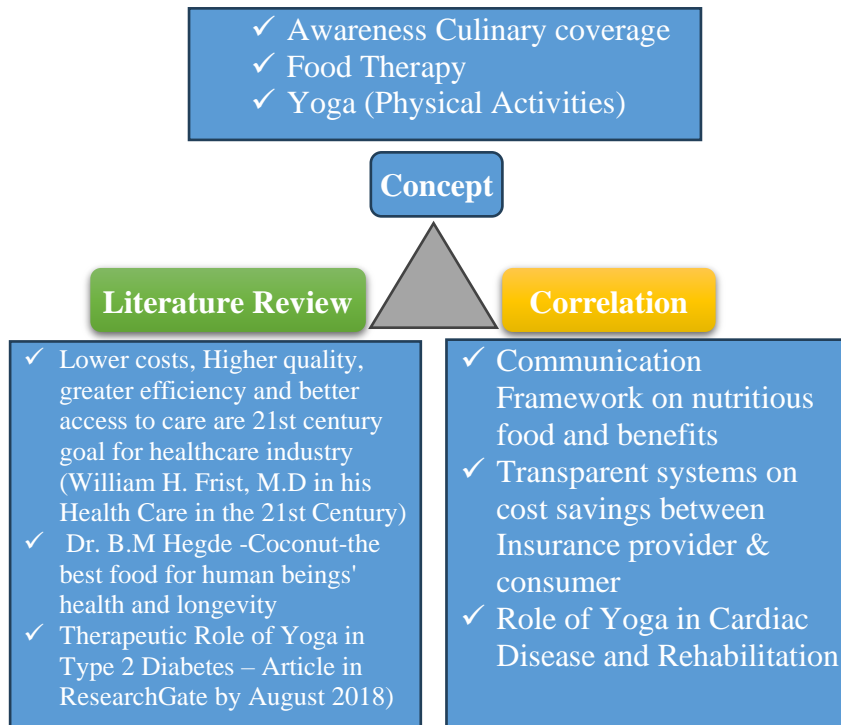
Opportunity from this study supported in understand the factor (awareness) plays extremely critical role in human society, Healthcare Insurance Coverage has long been described as “a confined industry,” branded by fragmentation at the national, state, community, and practice levels. The multidimensional source set of policies guiding the healthcare consumer system for commercial (non-government sector) benefits coverages; states divide their responsibilities with multiple agencies form private sectors, while providers practicing in the same community and caring for the same patients often work independently from one another. With this factor being in the mind of researcher, performed detailed study through available sources and identified options to read the insightful mind system of employee consuming healthcare benefits coverages through the employer helped in understanding,

- ✓ Absence of clinical information (‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’) in systems impacts overall quality of care; and high-cost, intensive medical intervention is rewarded over higher-value primary care, including preventive medicine and the management of chronic illness.

- ✓ Enhanced awareness (internal & external social events and network technologies) about the nutritious food and benefits within the employees through the healthcare benefits coverage payers to insurer resulted with better utilization of coverage supporting the financial demand post COVID around basic causes from blood pressure and blood glucose.
- ✓ Awareness helped the associates (employees under 35 in specific) with effective utilization of healthcare benefits coverage in lower cost (Social determinants of health, cost-related non-adherence, and cost-reducing behaviors among adults with diabetes: findings from the National Health Interview Survey).
- ✓ Economic prevalence for all sectors playing in the healthcare insurance industry through cost benefits analysis (savings for employee & employer, avoidance for insurance provider), this was understood from the responsive survey with employee currently using private insurance located in major cities (Bengaluru & Hyderabad) from southern region of India.
- ✓ Learning about the food habits of employees at the avenue of employment is playing very critical role in maintaining better health considering the average employee spends one-third of the day in the workplace; thus, connecting with questionnaire associated to cost benefits of healthcare insurance coverage taken just in this environment seem reasonable and relatively easy to identify the scope for improvements against all the players (Payer, Employer & Employee) of healthcare insurance market.

5.2 Discussion of Research Question One

This chapter support in multidimensional observation review from the research study correlation to the conceptual framework, and results related to the existing literature review.



Sources of data from these reviews supporting the above review in multi dimension, (*Ed Johnson et al., 2022*) and *Glucose Revolution: The Life-Changing Power of Balancing Your Blood Sugar (Jessie, 2022)* & *Digital health application integrating wearable data and behavioral patterns improves metabolic health, (Ashkan et al., 2023)*.

Table 5.1 Are the Healthcare Insurance Consumer have awareness about consuming right food and physical activities (Yoga) serve as best medicine? **Yes (by age)**

Variable/Age Group	<35	35-40	>40
Food as Medicine - Does Health Insurance have coverage for "Culinary medicine"?	46%	22%	0%
Food as Medicine -Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions?	46%	22%	4%
Food as Medicine - Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels?	47%	35%	3%
Yoga (Physical Activities) - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities?	44%	41%	4%

Reading from the questionnaire supported in deploying the above table with required parameter (age categorized) supported in performing the research with purposeful sampling widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest. Although there are several different purposeful sampling strategies, criterion sampling appears to be used most in analysis research (Lawrence A. et al., 2016) & (Cresswell, 2011).

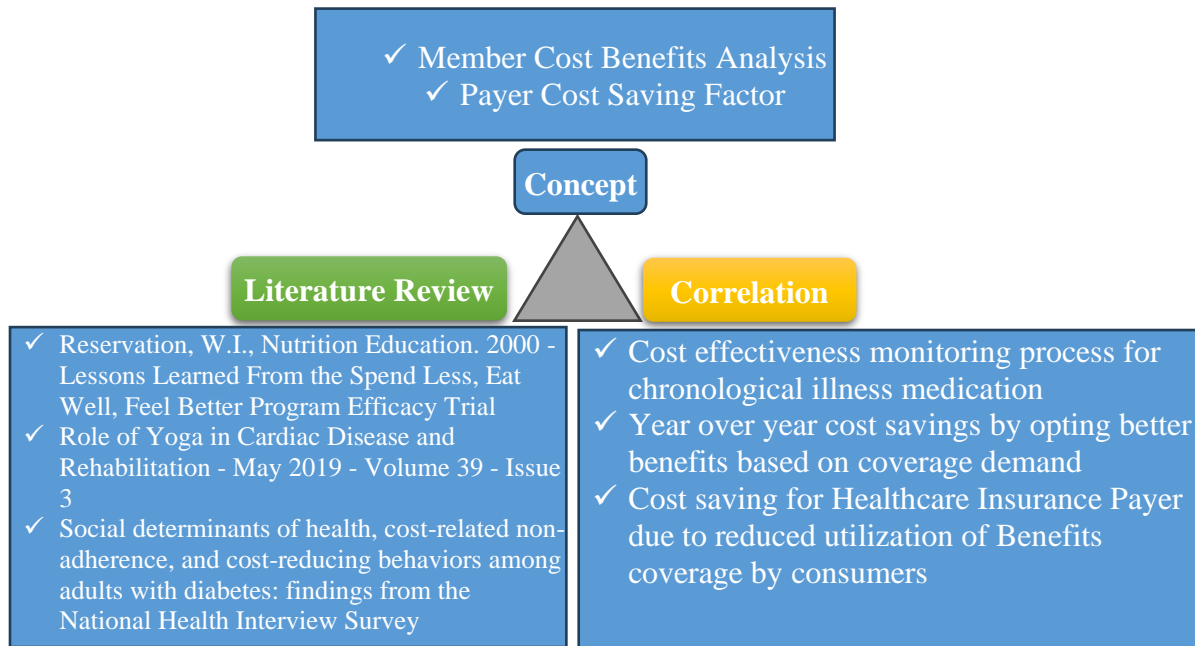
Table 5.2 Are the Healthcare Insurance Consumer have awareness about consuming right food and physical activities (Yoga) serve as best medicine? **No (Need Improvement/ Not Aware/ Not Tracked/ Not Always/ Limited Awareness)**

Variable/Age Group	<35	35-40	>40
Food as Medicine - Does Health Insurance have coverage for "Culinary medicine"?	9%	19%	4%
Food as Medicine -Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions?	9%	19%	0%
Food as Medicine - Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels?	8%	7%	1%
Yoga (Physical Activities) - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities?	11%	0%	0%

Qualitative research has been used for diverse sub-topics, including the experiences of employee with respect to various aspects of healthcare insurance coverage using Qualitative research in healthcare: necessity and characteristics. (Pyo J. et al., 2023)

5.3 Discussion of Research Question Two

Focusing the research idea (Cost Benefits Analysis) with detailed literature reviews and multidimensional data analysis with insightful source of information from healthcare insurance consumers, this section of the chapter summaries the observations from the research study correlation to the coverage of conceptual framework, and results related to the existing literature review.



Understanding that cost benefits analysis cannot directly establish connection to each parties involve in the healthcare insurance industry, in this analysis we have 3 factors considered to perform the cost benefits analysis by referencing Mobile Technology (*Abdelaziz et al., 2022*), Eating and Healing, Traditional Food As Medicine · (*Andrea & Lisa, 2006*) and Physical Activity and Exercise for Older Adults (*Jeorge & Willy M., 2022*).

Table 5.3. Have the awareness about consuming right food and physical activities (Yoga) help with cost effectiveness? **Yes (Switched from Low Ded-High Prem to High Ded-Low Prem)**

Variable/Age Group	<35	35-40	>40
Food as Medicine - Have ‘food be thy medicine and medicine be thy food’ communication from Healthcare Insurance helped in cost benefits	45%	24%	3%

Table 5.4. Have the awareness about consuming right food and physical activities (Yoga) help with cost effectiveness? **No (Limited, No Change)**

Variable/Age Group	<35	35-40	>40
Food as Medicine - Have ‘food be thy medicine and medicine be thy food’ communication from Healthcare Insurance helped in cost benefits	11%	17%	1%

Primary data were collected from employees of two cities of South Indian states (Bengaluru & Hyderabad) to assess the cost of screening. Population-based screening for Food as Medicine and Physical Activities – Yoga in India could potentially reduce cost against diagnosis and treatment for diabetes and hypertension and be cost-effective if it is linked to care from healthcare through health and wellness centers for provision described in Cost-effectiveness of population-based screening for diabetes and hypertension in India: an economic modelling study, (*Gunjeet et al., 2022*).

Purposeful sampling technique used as part of this mixed method (quantitative) research method for the identification and selection of information-rich cases for the most effective data analysis to support the theory of understanding the healthcare insurance consumers intent in cost effectiveness process to support the family structure in high-cost life model of cities in southern part of India. Below model supported in comparison study through the quantitative research process and gave reference (>25%) of employee from private operations sectors moved from cost saving premium for healthcare insurance coverage.

Questions Posted	2024 %	2023%
Food as Medicine - Does Health Insurance have coverage for "Culinary medicine"? - Yes	68%	49%
Food as Medicine -Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions? - Yes	71%	65%
Food as Medicine - Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels? - Yes	85%	67%
Yoga (Physical Activities) - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities? - Yes	89%	41%
Food as Medicine - Have 'food be thy medicine and medicine be thy food' communication from Healthcare Insurance helped in cost benefits? - Yes	72%	31%

Chapter VI:
SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

6.1 Summary

As an extensive journey in this research study with intensive information and data analyzed from external sources and information gathered through this study around the Healthcare Insurance Payer & Consumer play an integral role and understanding the factors determine ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ as source for organic process to help all classes in economic society (Employers in Private sectors) in India. This research confirms the influence of Natural source of food products & standard physical activities (Yoga, Running, Walking, Stretching et.al) supplement toward organic healing process within human system from natural causes (e.g. Covid-19) & have high potential opportunity in cost saving from consumption of Health Insurance Payments. Healthcare Insurance organizations are driving the wheels in market now supporting the extended communication process through all applicable sources (*Digital: Electronic Mails, Social Posting, SMS on registered contract preferences and Social Media’s*). Supplemental Medication (*Nutritious Food & Yoga, Understand the Nutritious Labelling*) as a learning experience is recommended and since Covid-19 increased the awareness within all societies located with both the cities (Bengaluru & Hyderabad) from southern region of

India. Study conducted through this research program have opened the forum within payer organization.

“Eighty percent of a person’s health comes from factors outside of the doctor’s office.

Ensuring access to healthy food is a real opportunity to address root causes of health

challenges” – Gail K Boudreaux, President Elevance Health & Carelon

“There’s an important link between nutrition and health. When we give food the chance it

deserves to help prevent, manage and even treat disease, the data is clear that our health

benefits” – Dr. Kofi Essel, Food as Medicine Director, Elevance Health & Carelon

Government paying attention in insurer care by utilizing technology can help understand

patients’ problems and needs, blurring the boundaries between healthcare professionals

and patients while facilitating faster delivery of healthcare processes from *Changing*

paradigm of healthcare communications in India (Asawari, 2023) Sathaye in Voices,

Health, TOI.

6.2 Implications

In the course of insightful review during this research, study says the services (insurance provider, insurance coverage enabler, insurance consumer) availed in healthcare insurance industry needs wide consideration in utilizing the available facilities in better ways to address the major concern (cost effectiveness) around the thesis of handling cost efficient life during crisis. Detailed review of the research says, Out-Of-Pocket Expenditure (OOPE) directly reflects the burden of healthcare expenses that households bear irrespective of circumstances. Despite the availability of social security schemes provides healthcare benefits and study carried the Challenges for Lower-Middle-Income Countries in Achieving Universal Healthcare: An Indian Perspective - Healthcare delivery in India is provided both by the public and the private sectors with a significant skew towards private players, driven by inadequacies of infrastructure in the public setup (*Meena G & Harvinder, 2023*), a high proportion of Indian households are still incurring OOPE. Employer-sponsored health insurance simply means that the substantial number of workers or employees have been covered but failure to recognize the reasons behind OOPE, a comprehensive understanding of people's attitudes and behavior is needed (*Anugraha et al., 2024*), Adherence to dietary guidelines is low (<50%) despite positive impacts in disease progression, clinical outcomes, and medical costs. Outcome of the research study

talk about two major opportunities with cost benefits (member cost saving & payer cost avoidance) for Healthcare Insurance Members & Payer by following the awareness programs established on ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga.’ Referential insights from the literature review provides a message that needs attention from employers to enhance employee behavioral health with Effectiveness of Workplace Yoga Interventions to Reduce Perceived Stress in Employees (*Elisabetta et al., 2020*), *In order to promote the participation of employees to several health programs carried out directly at workplace, several corporate wellness programs have been implemented over the years*).

One interesting factor identified during this analysis is “Front-of-pack nutrition labelling” data utilization by consumers and producers is concerning and demand for increased awareness about nutrition labelling in India (*Richa & Bharathi, 2020*) - To be effective, front-of-pack symbols must be a part of the principal display panel and should have appropriate symbol-to-text ratio specifications. Mandatory front of pack labelling must be preceded by strong research and in a format that is understandable and acceptable to all.

6.3 Recommendations for Future Research

Food as Medicine is a philosophy where food and nutrition aids individuals through interventions that support health and wellness. Focus areas for future research includes:

- ✓ Food as preventative medicine to encourage health and well-being - Beyond Blood Glucose (Diabetes) & Blood Pressure study conducted as part of this study and expand the scope with step therapy medications,
- ✓ Food as medicine in disease management and treatment; - Expand the coverage for Vision, Liver, Kidney & Bone Joint healing process with Yoga practice and increased awareness program through available technologies (Digital & Social Media)
- ✓ Food as medicine to improve nutrition security (Practiced by all sources utilizing healthcare benefits – Payer, Employer, Employee)
- ✓ Food as medicine to promote food safety – Support organic farming consumption support nature in all well-being.
- ✓ Ancient physician Hippocrates stated: “All parts of the body, if used in moderation and exercised in labors to which each is accustomed, become thereby healthy and well developed and age slowly; but if they are unused and left idle, they become liable to disease, defective in growth and age

quickly.” – Increased avenue (communication from government and private organization, social media, digital systems et.al) to talk about the physical activities in any forms supports for healthy lifestyle despite economic crisis.

Food as Medicine: A Retail Nutrition Framework, this framework was a project of the Nutrition in Food Retail Program Development (NFRPD) Fellowship and will be potential opportunity to extend this research on the “Retail Nutrition Framework” that outlines the landscape of Food as Medicine opportunities for food retailers, highlights current programs, and offers guidance for program development as part of Healthcare Insurance Payer benefits product in market for consumption. Utilizing the current era of electronic devices (combination of wearable and machine learning data can be used to provide effective and personalized lifestyle recommendations) and social media (*Asawari, 2023*) provides all sources of material for inception and insertion about the nutrition food consumption in better life.

Physical Activities - Health Benefits: Exercise is a powerful tool in the fight to prevent and treat numerous diseases (chronic or general infections from present systems), Given its whole-body, health-promoting nature, the integrative responses referenced from Health

Benefits of Exercise study (*Gregory N., et al., 2018*) to exercise should surely attract a detail of interest as the notion of “exercise is medicine” continues to its integration into clinical settings. A single exercise bout increases glucose uptake by skeletal muscle, sidestepping the insulin receptor and thus insulin resistance in T2D patients, The expectation for a single molecule target has been met for infectious diseases, which are often monogenic diseases.

6.4 Conclusion

This study enabled in learning with rich sources of insights to keep healthier life with self-healing mechanism inbuilt within the human system, provided it's better utilized with natural sources of food and active day to day life keeps the "Hope Molecule" with all benefits. Creating additional alertness through all opening available with current technology across the world will help in all participants of the Healthcare Insurance markets,

a) Payer as the insurance coverage enabling system incorporating services to establish attention on 'Nutritious food as medication' and 'Effective physical activities – Yoga' as behavioral health plan provision. Food-medicine products are important materials for daily health management and are increasingly popular in the global healthy food market learning from '*Food and medicine continuum*' in *the East and West: Old tradition and current regulation* (Ryu Yao et al.,2023).

b) Employer as the insurance coverage enabler for associates servicing in all sectors of the organization being consumer of healthcare insurance benefits coverage has avenue in creating healthy working environment for organizational deliverable productivity and inevitability supports the society with edible sources for healthy

lifestyle. This review emphasizes the imperative for additional investigations that utilize evidence-based approaches to formulate sound guidelines for efficacious nutrition interventions in occupational settings. This study functioned as a foundational framework for guiding both scholarly research and the pragmatic execution of nutrition programs in the workplace summary in *Improving Eating Habits at the Office: An Umbrella Review of Nutritional Interventions (Aleksandra et al., 2023)*. As increasing body of research indicates from this study says that diet and nutrition have a substantial impact on mood and mental well-being, as well as on work performance enable the employers work environment as greater avenue with opportunities for establishing the awareness with all sources of communication media. Applying Mobile Technology to Sustain Physical Activity After Completion of Cardiac Rehabilitation, (*Abdelaziz et al., 2022*) - says we identified four main themes through the interviews: technology use increased motivation to be physically active, technology use served as a reminder to be physically active, recommendations for technology to improve user experience, and desire for personal feedback).

c) Employee, the insurance coverage consumer from all sectors of the organization has utilized the avenue in absorbing healthy environment policies (nutritious food consumption, reading the nutrition label, Health in Food Systems, Improving Eating Habits at the Office, Workplace Yoga Interventions to Reduce Perceived Stress et.al) for well-being supported in crisis management at home. A study from Fober, A progress seen in employer-sponsored health insurance simply means that the large number of workers or employees have been covered in the country (*As per the recent data fetched from Niti Aayog Report, the existing health insurance schemes are able to potentially cover only 95 crores individuals in India. These schemes consist of government subsidized schemes, social health insurance schemes, and private insurance schemes*) under a health insurance coverage which tends to provide them with safety and security at the hour of need and directly supports the employee family with edible sources for healthy lifestyle. Improving Eating Habits at the Office: An Umbrella Review of Nutritional Interventions, (*Aleksandra et al., 2023*) study from this reference and research outcome from the responses of employee complements “This is of particular interest to employers, employees, and the public health sector, with well-being as an aspect of public health. The World Health Organization collaborates with its member states and

partners to promote the concept of well-being in global health and to achieve the “Sustainable Development Goals adopted by the United Nations”. In addition, supporting assets of employee as insurance consumer with efficient technology is a greater avenue with opportunities for establishing the awareness with all sources of information from Digital health application integrating wearable data and behavioral patterns improves metabolic health (*Ashkan et al., 2023*) - says *The effectiveness of lifestyle interventions in reducing caloric intake and increasing physical activity for preventing Type 2 Diabetes (T2D) has been previously demonstrated. The use of modern technologies can potentially further improve the success of these interventions, promote metabolic health, and prevent T2D at scale.*). Ensuing such intuitive prospects enabled at employment service helps in betterment life at crisis (*Challenges for Lower-Middle-Income Countries in Achieving Universal Healthcare -Meena G & Harvinder, 2023*).

Interesting literature review throughout specific modules gave great opportunities to follow the same despite the situation created at the cost of practice. “We must improve dramatically our abilities to Navigating the New Normal with Focus on Healthcare Accessibility, Innovation and Sustainability” referenced Motivations and Barriers to

Purchase Health Insurance (*Vilasini & Smita, 2023*) because as we see, based on the experience from pandemic scenario, the nature can still surprise us. Creative thoughts from methodology review of information and insights about effect way to handle the economic crisis management by healthcare insurance benefits coverage and supplemental medication ('Nutritious food as medication' and 'Effective physical activities – Yoga') during pandemic & post pandemic, however the situation like Covid-19 has never occurred before. It is understood that supplemental medication such as 'Nutritious Food Medication' & 'Effective physical activities – Yoga' is a course thus it does not consist of one action but includes multiple phases. We also know that this process required planning and establishing the awareness about consumption of nutrition through food and increased Immune by active physical movements is the main aspects of managing economic crisis in medication. Healthcare Insurance Coverage in crisis management are widely analyzed with rich reference presented in the literature review includes approaches, however some of the competencies such as effective & efficient communication and awareness programs & decision making are common to much research. The research aims at presenting 'Nutritious food as medication' and 'Effective physical activities – Yoga' during any natural disaster causing concerns on human health system with a particular stress on effective communication during the crisis, decision making and learning from crisis.

Research Methodology emphasizes that establishing simple and effective awareness & communication will be different at different nature of the crisis and we would like to study the specifics of the Nutrition consumed and increased Immune during Covid-19 in India by Health Insurance Providers & employers, what sources (Food & Yoga) have been used and how awareness communication established by their teams and what challenges they have come across. Going further, the research will concentrate on decision making to study whether traditional food culture or alternatives help in effective cost savings and if this can be considered long-term aspect in awareness creation with cost effectiveness as presented in the literature. Supplement Medication such as ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ as a learning experience is recommended and since Covid-19 was not known before, it would be interesting to study its impact on the Lower-Middle-Income society of the country: What were the lessons learnt from Food Supplements & Physical Exercise during Corona Virus crisis? How Covid-19 impacted and changed the society in consumption of food medication? – the research support with data to answers these questions.

Effective response from survey about awareness programs on ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ has evidenced greater positive progress on Health Insurance company’s reputation, productivity and overall success by introducing various initiatives *“Walkin Lunch”*, *“Exos” – Wellness and Fitness Program*, *Channel for “Healthy Lifestyle with natural food”* and *“Hydrate to Operate” – Wellness program*.

Presented literature will contribute to overall concepts and I do strongly believe that my research will contribute to better understanding of the challenges of implementing ‘Nutritious food as medication’ and ‘Effective physical activities – Yoga’ in these uncertain times and beyond.

REFERENCES

- Abdelaziz Elnaggar., Julia von Oppenfeld., Mary A Whooley., Stephanie Merek., and Linda G Park. (2022, September). Applying Mobile Technology to Sustain Physical Activity After Completion of Cardiac Rehabilitation: Acceptability Study. <https://pubmed.ncbi.nlm.nih.gov/34473064>
- Adithya Pradyumna., Arima Mishra., Jürg Utzinger., and Mirko S. Winkler. (2021, March 15). Health in Food Systems Policies in India: A Document Review. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9808200>
- Aditya Mahindru., Pradeep Patil., Varun Agrawal. (2023, January 7). Role of Physical Activity on Mental Health and Well-Being: A Review. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9902068/>
- Aleda M.H. Chen., Juanita A. Draime., Sarah Berman., Julia Gardner., Zach Krauss., and Joe Martinez. (2022, March 18). Food as medicine, Exploring the impact of providing healthy foods on adherence and clinical and economic outcomes. <https://pubmed.ncbi.nlm.nih.gov/35478519/>
- Aleksandra Hyzy., Mariusz Jaworski., Ilona Cieslak., Joanna Gotlib-Małkowska., and Mariusz Panczyk. (2023, December 12). Improving Eating Habits at the Office: An Umbrella Review of Nutritional Interventions. <https://pubmed.ncbi.nlm.nih.gov/38140338/>
- Amit Dang., Dimple Dang., B.N. Vallish. (2021, May). Importance of Evidence-Based Health Insurance Reimbursement and Health Technology Assessment for Achieving Universal Health Coverage and Improved Access to Health in India. <https://pubmed.ncbi.nlm.nih.gov/33476860/>
- Andrea Pieroni., Lisa Price. (2006). Eating and Healing, Traditional Food as Medicine, <https://doi.org/10.1201/9781482293616>
- Anugraha John., Hari Teja Avirneni., Sinthu Sarathamani Swaminathan., Sivakumar Abhina. (2024, September). Determinants of Out-of-Pocket Health Care Expenditures and Financial Coping Strategies among Beneficiaries of a State-Run Health Insurance Scheme in South India. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9993438/>
- Apurba Giri. (2021, October 14). Immunity Boosting Functional Foods to Combat COVID-19, Publisher: Taylor & Francis., ISBN:9781000485974. <https://books.google.com/books?id=h19CEAAAQBAJ&printsec=frontcover#v=onepage&q&f=false>
- Asawari Sathaye. (2023, June 25). Changing paradigm of healthcare communications in India. Health, TOI. <https://timesofindia.indiatimes.com/blogs/voices/changing-paradigm-of-healthcare-communications-in-india/>
- Ashkan Dehghani Zahedani., Tracey McLaughlin., Arvind Veluvali., Nima Aghaeepour., Amir Hosseinian., Saransh Agarwal., Jingyi Ruan., Shital Tripathi., Mark Woodward., Noosheen Hashemi & Michael Snyder. (2023, November 25). Digital health application integrating wearable data and behavioral patterns improves metabolic health. <https://doi.org/10.1038/s41746-023-00956-y>

- Ashkan Dehghani Zahedani., Tracey McLaughlin., Arvind Veluvali., Nima Aghaeepour., Amir Hosseinian., Saransh Agarwal., Jingyi Ruan., Shital Tripathi., Mark Woodward., Noosheen Hashemi & Michael Snyder. (2024, January 12). Digital health application integrating wearable data and behavioral patterns improves metabolic health. <https://doi.org/10.1038/s41746-024-00996-y>
- Ashok Kumar Malhotra. (2017, July). An Introduction to Yoga Philosophy. <https://doi.org/10.4324/9781315262635>.
- Bhageerathy Reshmi., Bhaskaran Unnikrishnan., Eti Rajwar., Shradha S Parsekar., Ratheebhai Vijayamma., and Bhumika Tumkur Venkatesh. (2021, Dec 22). Impact of public-funded health insurances in India on health care utilization and financial risk protection: a systematic review. <https://pubmed.ncbi.nlm.nih.gov/34937714/>
- Boone Jan. (2014, October 24). Basic versus Supplementary Health Insurance: The Role of Cost Effectiveness and Prevalence. TILEC Discussion Paper No. 2014-039, Discussion Paper No. 2014-065. <https://ssrn.com/abstract=2516298> or <http://dx.doi.org/10.2139/ssrn.2516298>
- Blair O'Neill & Paolo Raggi (2020), The ketogenic diet: Pros and cons- Atherosclerosis. <https://pubmed.ncbi.nlm.nih.gov/31805451>
- Bridget C O'Brien., Ilene B Harris., Thomas J Beckman., Darcy A Reed., David A Cook. (2014, September). Standards for reporting qualitative research: a synthesis of recommendations. <https://pubmed.ncbi.nlm.nih.gov/24979285/>
- C.F.R. § 164.502(a) (2006), A covered entity is required to make a reasonable effort to use and disclose only the minimum amount of PHI needed for the intended purpose. <https://www.law.cornell.edu/cfr/text/45/164.502>
- Chung J., Cho JJ. (2008). Use of qualitative research in the field of health, J Korean Acad. Fam Med. 29(8):553–562. <https://www.jpmph.org/upload/pdf/jpmph-22-471.pdf>
- Cresswell JW., Plano Clark VL. (2011). Designing and conducting mixed method research. 2nd Sage, Thousand Oaks, CA. <https://books.google.com/books?id=6tYNo0UpEqkC&printsec=frontcover#v=onepage&q&f=false>
- Denise Capela Santos., Sonia Jaconiano., Sofia Macedo., Filipa Ribeiro., Sara Ponte., Paula Soares., Paula Boaventura. (2023, Feb). YOGA for COVID-19: AN ANCIENT PRACTICE FOR A NEW CONDITION – A LITERATURE REVIEW. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9744485>
- Diletta Parisi., Swati Srivastava., Divya Parmar., Christoph Strupat., Stephan Brenner., Caitlin Walsh., Rupak Neogi., Sharmishtha Basu., Susanne Ziegler., Nishant Jain., Manuela De Allegri. (2023, March). Awareness of India's national health insurance scheme. <https://pubmed.ncbi.nlm.nih.gov/36478057/>
- Ed Johnson Adam Almond., Jay Bhatt., Daniel Edsall., Spencer Young., Justin Cook. (2022, September 26). Food as medicine - A bad diet's role—in cardiovascular disease, type 2 diabetes, and even some forms of cancer—contributes to one in every five deaths globally. <https://www2.deloitte.com/us/en/insights/industry/retail-distribution/future-of-fresh-food-sales/fresh-food-as-medicine-for-the-heartburn-of-high-prices.html>

- Elisabetta Della Valle., Stefano Palermi., Irene Aloe., Roberto Marcantonio., Rocco Spera., Stefania Montagnani., and Felice Sirico. (2020, May 26). Effectiveness of Workplace Yoga Interventions to Reduce Perceived Stress in Employees. <https://pubmed.ncbi.nlm.nih.gov/33467249/>
- Elsevier Science., A.J. Culyer., J.P. Newhouse., Mark V. Pauly., Pedro Pita Barros., Thomas G. McGuire. (2000, July 19). Handbook of Health Economics, 1st Edition, Volume 1A. <https://shop.elsevier.com/books/handbook-of-health-economics/culyer/978-0-444-50470-8>
- Employee Benefit- Paramount TPA <https://www.paramounttpa.com/continental-automotive/Downloads/Employee%20Benefits%20Manual.pdf>
- Gale NK., Heath G., Cameron E., Rashid S., Redwood S. (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC Med Res Methodol. <https://pubmed.ncbi.nlm.nih.gov/24047204/>
- Geeta Sikand., Renee E. Cole., Deepa Handu., Desiree de Waal., Joanne Christaldi., Elvira Q. Johnson., Linda M. Arpino., Shirley M. Ekvall. (2018, October). Registered Dietitians Effective in Dyslipidemia, Clinical and Cost Benefit of Medical Nutrition Therapy by Registered Dietitian Nutritionists for Management of Dyslipidemia: A Systematic Review and Meta-Analysis. <https://www.sciencedirect.com/science/article/abs/pii/S1933287418302745>
- Giacomo Di Matteo., Mattia Spano., Michela Grosso., Andrea Salvo., Cinzia Ingallina., Mariateresa Russo., Alberto Ritieni., Luisa Mannina. (2020, August 1). Food and COVID-19: Preventive/Co-therapeutic Strategies Explored by Current Clinical Trials and in Silico Studies. <https://pubmed.ncbi.nlm.nih.gov/32752217/>
- Gregory N. Ruegsegger and Frank W. Booth. (2018, July). Health Benefits of Exercise. <https://pubmed.ncbi.nlm.nih.gov/28507196/>
- Gunjeet Kaur., Akashdeep Singh Chauhan., Shankar Prinja., Y Teerawattananon., Malaisamy Muniyandi., Ashu Rastogi. (2022, January). Cost-effectiveness of population-based screening for diabetes and hypertension in India: an economic modelling study. <https://pubmed.ncbi.nlm.nih.gov/34774219/>
- Healthcare Insurance Coverage in India. <https://www.starhealth.in/health-insurance/> or <https://www.paramounttpa.com/Home/overview.aspx>
- Higgins JPT TJ., Chandler J., Cumpston M., eds. Cochrane. (2020, September). Handbook for Systematic Reviews of Interventions version 6.1. Vol. 2020.
- Hsieh HF., and Shannon SE. (2005). Three approaches to qualitative content analysis. Qual Health Res. 15(9):1277–1288. <https://pubmed.ncbi.nlm.nih.gov/16204405/>
- Ian I., and Mitroff. (2020, April 23). COVID-19: Corona virus: A prime example of a wicked mess. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7177065>
- Iben Axen., and Gabriella Follin. (2017, February). Medical yoga in the workplace setting—perceived stress and work ability—a feasibility study. <https://pubmed.ncbi.nlm.nih.gov/28137528/>

- Indian Council of Medical Research (ICMR)., (2023, June 09). New study which was published in the journal 'The Lancet Diabetes and Endocrinology', said India is home to a whopping 315 million people with hypertension, and 101 million with diabetes. <https://economictimes.indiatimes.com/news/india/over-100-million-diabetes-patients-in-india-now-why/101-million-diabetics/slideshow/100883830.cms>
- Insurance Regulatory and Development Authority of India (IRDA) New Delhi. (2022): Government of India; Annual Report 2020-21. <https://tourism.gov.in/annual-reports/annual-report-2020-21>
- International Journal of Recent Innovations in Academic Research. (2023, December). E-ISSN: 2635-3040; P-ISSN: 2659-1561. <https://www.ijriar.com>
https://www.researchgate.net/publication/358046292_International_in_Thomas_Hobbes'_Leviathan_An_Evaluation
- Jagannath V. Dixit., Rashmi S. Kulkarni., and Shraddha Y. Badgujar. (2021, December 15). Diabetes Care in India: A Descriptive Study. <https://pubmed.ncbi.nlm.nih.gov/35136743/>
- Jessie Inchauspe. (2022, April). Glucose Revolution: The Life-Changing Power of Balancing Your Blood Sugar. <https://www.simonandschuster.com/books/Glucose-Revolution/Jessie-Inchauspe/9781982179410>
- Jessie Inchauspe. (2023, March 3). The Glucose Goddess Method - The 4-Week Guide to Cutting Cravings, Getting Your Energy Back, and Feeling Amazing. <https://books.google.com/books?id=R6UEAAQBAJ&printsec=frontcover#v=onepage&q&f=false>
- Joda P. Derrickson., Chad Buchanan., G. Kauai Asing., Annette Okuma. (2003, February). Lessons Learned from the “Spend Less. Eat Well. Feel Better.” Program Efficacy Trial. [https://doi.org/10.1016/S1499-4046\(06\)60324-2](https://doi.org/10.1016/S1499-4046(06)60324-2)
- Joda P. Derrickson., Full Plate Inc, G. Kauai Asing., Kapiolani Community College, Annette Okuma and Chad Buchanan. (2003, February). Journal of Nutrition Education and Behavior, Lessons Learned from the Spend Less, Eat Well, Feel Better Program Efficacy Trial, Family Service Office, Salvation Army, Honolulu, HI.
- Jorge Camilo Mora., Willy M. Valencia. (2022, June 30). Physical Activity and Exercise for Older Adults. <https://pubmed.ncbi.nlm.nih.gov/29129214/>
- Joseph Doyle., Marcella Alsan., Nicholas Skelley. (2023, December 26). Effect of an Intensive Food-as-Medicine Program on Health and Health Care Use: A Randomized Clinical Trial. <https://pubmed.ncbi.nlm.nih.gov/38147326/>
- Jun-Sang Yu. (2024, Mar 31). Suggestion for Objective Evaluation of Comparative Pulse Diagnosis. <https://pubmed.ncbi.nlm.nih.gov/38560340/>
- K Karuna Jyothi., B Indira Reddy. (2023, February). Study on Virtual Private Network (VPN), VPN's Protocols and Security. https://www.researchgate.net/publication/368831275_CSEIT1835225_Study_on_Virtual_Private_Network_VPN_VPN's_Protocols_And_Security
- Katherine S. Rhodes., Carol F. Kirkpatrick. (2018, October). The value of incorporating medical nutrition therapy by a registered dietitian nutritionist in clinical practice. <https://pubmed.ncbi.nlm.nih.gov/30190112/>

- Katherine S. Rhodes. (2015, August). Journal of Clinical Lipidology - Medical nutrition therapy is the essential cornerstone for effective treatment of “refractory” severe hypertriglyceridemia regardless of pharmaceutical treatment: Evidence from a Lipid Management Program. <https://pubmed.ncbi.nlm.nih.gov/26228674/>
- Lawrence A. Palinkas., Sarah M. Horwitz., Carla A. Green., Jennifer P. Wisdom., Naihua Duan., and Kimberly Hoagwood. (2016, September 1). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. <https://pubmed.ncbi.nlm.nih.gov/24193818/>
- Lucy Field., Rachel A. Pruchno., Jennifer Bewley., Edward P. Lemay Jr., & Norman G. Levinsky. (2006, September). Using Probability vs. Nonprobability Sampling to Identify Hard-to-Access Participants for Health-Related Research: costs and contrasts. <https://pubmed.ncbi.nlm.nih.gov/16835390/#:~:text=Probability%2Dbased%20sampling%20was%20more,status%2C%20and%20professional%20job%20status>
- M.S. Krishnamurthy., and JV Hebbar. (2019, January 24). Easy Ayurveda Home Remedies: Based On Authentic, Traditional Ayurveda Practice. ISBN:9781684667147. https://books.google.com/books/about/Easy_Ayurveda_Home_Remedies.html?id=d-eEDwAAQBAJ
- Maheshwari R. (2024, September 23). Healthcare needs of the population, Forbes Advisor INDIA. Top Health Insurance Statistics Of 2024. <https://www.forbes.com/advisor/in/health-insurance/health-insurance-statistics>.
- Mangala Subramanian., and Arun Gopi. (2016, January). Awareness of health insurance in a rural population of Bengaluru, India. DOI: [10.5455/ijmsph.2016.15042016476](https://doi.org/10.5455/ijmsph.2016.15042016476)
- Manya Rathore. (2024, April 9). Food security in India - statistics & facts. <https://www.statista.com/topics/7824/food-security-in-india/#topicOverview>
- Marczyk, G. R., DeMatteo, D., & Festinger, D. (2005). Essentials of Research Design and Methodology. <https://books.google.com/books?id=IhLISGyJwcwC&printsec=frontcover#v=onepage&q&f=false>
- Mark V. Pauly., Pedro Pita Barros., & Thomas G. McGuire. (2011, December 5) Handbook of Health Economics Volume 2, by Publisher: Elsevier Science. <https://books.google.com/books?id=ocRyBovU6toC&printsec=frontcover#v=onepage&q&f=false>
- Marouane Chemed., Ammar Kadi., Svetlana Merenkova., Irina Potoroko., & Imed Messaoudi. (2023, March 29). Improving Dietary Zinc Bioavailability Using New Food Fortification Approaches: A Promising Tool to Boost Immunity in the Light of COVID-19. <https://pubmed.ncbi.nlm.nih.gov/37106716/>
- Meenu G. Sharma., & Harvinder Popli. (2023 January 13). Challenges for Lower-Middle-Income Countries in Achieving Universal Healthcare: An Indian Perspective. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9839153>
- Merriam B.S. Nobel., & Jossey-Bass. (2018). Qualitative Research: a Guide to Design and Implementation.

- Michael Chletsos., & Anna Saiti. (2021, January 2). Strategic Management and Economics in Health Care.
<https://books.google.com/books?id=y5PHDwAAQBAJ&printsec=frontcover#v=onepage&q&f=false>
- N B Swetha., S Shobha., and S Sriram. (2020, April). Prevalence of catastrophic health expenditure and its associated factors, due to out-of-pocket health care expenses among households with and without chronic illness in Bengaluru, India: a longitudinal study. <https://pubmed.ncbi.nlm.nih.gov/32490274/>
- Naina Agarwal. (2022, September 7). Fostering Nutrition Awareness in India: A Path to a Healthier Nation, Nutrition Specialist Diet Consultant Empowering Healthy Lifestyles.
<https://www.linkedin.com/pulse/fostering-nutrition-awareness-india-path-healthier-nation-agarwal/>
- National Health Authority, New Delhi, India. (2022). Government of India; 2022. Annual Report 2021-22. <https://nha.gov.in/img/resources/Annual-Report-2021-22.pdf>
- Nitin Upadhyay., and Aakash Kamble. (2023, March 14). Virtual healthcare in the new normal: Indian healthcare consumers adoption of electronic government telemedicine service, Indian Institute of Management Jammu, Old University Campus.
<https://www.sciencedirect.com/science/article/abs/pii/S0740624X22001368>
- Patton MQ. (2002). Qualitative research and evaluation methods, 3rd Sage Publications; Thousand Oaks, CA.
<https://books.google.com/books?id=FjBw2oi8El4C&printsec=frontcover#v=onepage&q&f=false>
- Pyo J., Lee W., Choi EY., Jang SG., Ock M., and J Prev. (2023). Qualitative research in healthcare: necessity and characteristics. *Med Public Health*;56(1):12–20.
[Journal of Preventive Medicine and Public Health](https://doi.org/10.1016/S1499-4046(06)60225)
- Rachel B Acton., Vicki L Rynard., Jean Adams., Jasmin Bhawra., Adrian J Cameron., Alejandra Contreras-Manzano., Rachel E Davis., Alejandra Jáuregui., Gary Sacks., James F Thrasher., Lana Vanderlee., Christine M White., and David Hammond. (2022, September 17). International Food Policy Study., Awareness, use and understanding of nutrition labels among adults from five countries: findings from the 2018 – 2020. <https://pubmed.ncbi.nlm.nih.gov/36122623/>
- Radhika Rajgopal., Ruby H. Cox., Michael Lambur., Edwin C. Lewis. (2002, February). Cost-Benefit Analysis Indicates the Positive Economic Benefits of the Expanded Food and Nutrition Education Program Related to Chronic Disease Prevention.
<https://pubmed.ncbi.nlm.nih.gov/11917669/>
- Radhika Rajgopal Ph.D. (2002 February). *Journal of Nutrition Education and Behavior*.
[https://doi.org/10.1016/S1499-4046\(06\)60225](https://doi.org/10.1016/S1499-4046(06)60225)

- Raghupathy Anchala., Nanda K. Kannuri., Hira Pant., Hassan Khan., Oscar H. Franco, Emanuele Di Angelantonio., and Dorairaj Prabhakaran. (2014, April 30). Hypertension in India: a systematic review and meta-analysis of prevalence, awareness, and control of hypertension. <https://pubmed.ncbi.nlm.nih.gov/24621804/>
- Rahul Hegde., Karthamada Ganapathy Kiran., & Nanjesh Kumar S. (2020, March). Knowledge, Coverage and Usage Patterns of Health Insurance in Rural South India, Indian Journal of Public Health Research & Development, Vol. 11, No. 03. DOI:[10.37506/ijphrd.v11i3.834](https://doi.org/10.37506/ijphrd.v11i3.834)
- Richa Pande Subbarao., M Gavaravarapub Subbarao., & Bharati Kulkarni. (2020, April). Front-of-pack nutrition labelling in India, [https://www.thelancet.com/journals/lanpub/article/PIIS2468-667\(20\)30031-1/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-667(20)30031-1/fulltext)
- Rinderle-Ma S., Sakr S., and Zomaya, A. (2018, March 29). Multidimensional Process Analytics., Encyclopedia of Big Data Technologies. Springer, Cham. https://doi.org/10.1007/978-3-319-63962-8_97-1
- Roosa Tikkanen., Robin Osborn., Elias Mossialos., Ana Djordjevic., George A. Wharton. (2018 March). National Health Protection Scheme, Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana, or PM-JAY, which allows them to also get cashless secondary and tertiary care at private facilities, In collaboration with Nishali Patel, Policy Fellow, International Health Systems, London School of Economics. <https://www.commonwealthfund.org/international-health-policy-center/countries/india>
- Russell Jaffe. (2021, January). Joy in Living: The Alkaline Way Paperback. ISBN-10: 1737110245. https://www.genesisnmc.com/wp-content/uploads/2020/04/Joy_In_Living_TheAlkalineWay.pdf
- Russell Jaffe. (2022, February 22). Thriving in the 21st Century. ISBN-10:1737110229 <https://books.google.com/books?id=QX5ZEAAAQBAJ&printsec=frontcover#v=onepage&q&f=false>
- Ruyu Yao., Chunnian He., & Peigen Xiao. (2023, January). ‘Food and medicine continuum’ in the East and West: Old tradition and current regulation. <https://pubmed.ncbi.nlm.nih.gov/36875443/>
- Sachin Kumar Sharma., Savita Agnihotri., Niranjana Kala., and Shirley Telles. (2022, March 20). Perceptions about the Benefits and Negative Outcomes of Yoga Practice by Yoga-Naïve Persons: A Cross-sectional Survey. <https://pubmed.ncbi.nlm.nih.gov/35444367/>
- Samir Garg., Sayantan Chowdhury., & T Sundararaman. (2019, Dec 27). Utilization and financial protection for hospital care under publicly funded health insurance in three states in Southern India. <https://pubmed.ncbi.nlm.nih.gov/31882004/>

- Sanam Roder-Deewan., Anna Gage., Lisa R Hirschhorn., Nana A Y Twum-Danso., Jerker Liljestr nd., Kwanele Asante-Shongwe., Talhiya Yahya., and Margaret Kruk. (2020, Aug 27). Level of confidence in and endorsement of the health system among internet users in 12 low-income and middle-income countries. DOI:[10.1136/bmjgh-2019-002205](https://doi.org/10.1136/bmjgh-2019-002205)
- Sanjay Zodpey., and Habib Hasan Farooqui. (2018, April). Universal Health Coverage in India: Progress achieved & the way forward. <https://pubmed.ncbi.nlm.nih.gov/29998865/>
- Sanjaya Mishra., Meenu Sharma., Ramesh C Sharma., Alka Singh., and Atul Thakur. (2016, March). Development of a Scale to Measure Attitude towards Open Educational Resources. DOI:[10.5944/openpraxis.8.1.236](https://doi.org/10.5944/openpraxis.8.1.236)
- SEBI. (2020, August 20). The Step-by-Step Guide to Cleanse the Colon, Detox the Liver and Lower High Blood Pressure Naturally | The Eat to Live Plan with Dr. Sebi ... moss & Herbs (Dr. Sebi Treatment and Cures) Paperback. <https://www.barnesandnoble.com/w/dr-sebi-kerri-m-williams/1137643752>
- Sharada Prasad Wasti., Padam Simkhada., Edwin R. van Teijlingen., Brijesh Sathian., and Indrajit Banerjee. (2022, Mar 31). The Growing Importance of Mixed-Methods Research in Health. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9057171/>
- Siddappa Naragatti. (2020, April). The Study of Yoga Effects on Health. <https://www.researchgate.net/publication/341026497>
- Sodai Kubota. (2020, Aug). An Attractive Dietary Approach to Prevention and Management of Type 2 Diabetes. DOI:[10.3390/nu12092502](https://doi.org/10.3390/nu12092502)
- Srimannarayana Gajula. (2019, December). Exploration on Consumer's Perception and Buying Behavior of Health Insurance Policies in Hyderabad City. DOI:[10.35940/ijeat.A1047.1291S52019](https://doi.org/10.35940/ijeat.A1047.1291S52019)
- Sriram, S., and Khan, M.M. (2020). Effect of health insurance program for the poor on out-of-pocket inpatient care cost in India: evidence from a nationally representative cross-sectional survey, BMC Health Serv Res 20(1), 839. DOI:[10.1186/s12913-020-05692-7](https://doi.org/10.1186/s12913-020-05692-7)
- Taylor Francis. (2018). The value of self-medication: summary of existing evidence. <https://www.tandfonline.com/doi/full/10.1080/13696998.2017.1390473>
- Tiwari S., Gupta S. (2014). Comparative Analysis of Health System. Global Journal of Finance and Management, 6(8), 797–800.
- Vaibhavi Shende., Vasant Wagh., Alexander Muacevic., & John R Adler., (2024, February 16). Public Health Insurance Status and Utilization of Healthcare Services Across India: A Narrative Review. <https://pubmed.ncbi.nlm.nih.gov/38496075/>
- Vilasini Jadhav., and Smita Ramakrishna. (2023, April 8). Motivations and Barriers to Purchase Health Insurance: A qualitative study - 2nd International Healthcare Management Conference 2022: Navigating the New Normal with Focus on Healthcare Accessibility, Innovation and Sustainability. DOI:[10.24083/apjhm.v18i1.1689](https://doi.org/10.24083/apjhm.v18i1.1689)
- William H Frist. (2005, Jan 20). Shattuck Lecture: Health care in the 21st century. <https://pubmed.ncbi.nlm.nih.gov/15659726/>

- Xintao Li., Zaisheng Zhang., Li Liu., Tongshun Cheng., and Gang Liu. (2022, July). Analysis of the Quantitative Evaluation of the Public Medical and Health System Costs During Pandemic Governance: Investigation Based on COVID-19.
<https://pubmed.ncbi.nlm.nih.gov/35910915/>
- Yin, Robert K. (2018). Case Study Research and Applications: Design and Methods (6th ed.). Thousand Oaks, CA.
<https://books.google.com/books?id=6DwmDwAAQBAJ&printsec=frontcover#v=onepage&q&f=false>
- Zeynep Dilsah., Karanam Yilmaz., Tulay Yilmaz., & Eda Tokman. (2023, July). Views of healthcare professionals on gender roles: A qualitative study.
<https://pubmed.ncbi.nlm.nih.gov/37560673/>

APPENDIX A
SURVEY COVER LETTER

Date

Dear Participant:

My name is **Balasubramaniam Kolappapillai**, and I am a Doctor in Business Analyst student at Swiss School of Business and Management. For my final Thesis, I am examining **“COST BENEFITS ANALYSIS: NUTRITIOUS FOOD AS MEDICATION IN HEALTHCARE INSURANCE COVERAGE”** research and you are identified as participant being a Healthcare Insurance consumer, such in utilizing Healthcare Insurance Coverage through employment at CGS a private organization at Bengaluru & Hyderabad cities. I am inviting you to participate in this research study by completing with your responded for list of questionnaires as posted to complete. There is no compensation corresponding nor is there any known risk. In order to ensure that all information will remain confidential, please do not include your name. Copies of the research will be provided to my SSBM supervisor.

Participation is strictly voluntary, and you may refuse to participate at any time. Thank you for taking the time to assist me in my educational endeavors. The data collected will provide useful information regarding awareness on Food as Medicine from Healthcare Insurance to consumers through effective communication. Completion of this questionnaire will indicate your willingness to participate in this study. If you require additional information or have questions, please contact me at the number listed below. If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to SSBM,

Questionnaire utilized in study:

Food as Medicine - Does Health Insurance have coverage for "Culinary medicine"?

Yes/Need Improvement/Not Aware

Food as Medicine -Did Healthcare Insurance have any communication process about awareness on healthier diet helps prevent and treat the most common of these debilitating conditions? *Yes/No/Limited Awareness/Not Tracked*

Food as Medicine - Do you read nutritional labels while shopping groceries & Awareness program from Healthcare Insurance on nutrition labels? *Yes/No/Not Always*

Food as Medicine - Have 'food be thy medicine and medicine be thy food' communication from Healthcare Insurance helped in cost benefits? *Yes (Switched from Low Ded-High Prem to High Ded-Low Prem)/No*

Yoga (Physical Activities) - Did Healthcare Insurance conducted physical activities programs for healthier lifestyles or any form of communication to encourage in physical activities? *Yes/No/Limited Awareness*

Follow on survey questions:

- ✓ The right foods can help keep me healthy and prevent me from suffering certain health problems, *Yes/No/Not Always?*
- ✓ The right foods can be therapeutic and help alleviate certain health problems, *Yes/No/ Limited Awareness?*
- ✓ Eating the right food can be the best medicine, *Yes/No/ Limited Awareness?*
- ✓ I am willing to spend more for food that can act like medicine *Yes/Need to Review/Not Interested*

APPENDIX B



INFORMED CONSENT FOR INTERVIEW

COST BENEFITS ANALYSIS: NUTRITIOUS FOOD AS MEDICATION IN
HEALTHCARE INSURANCE COVERAGE

I, agree to be interviewed for the research which will be conducted by a doctorate student at the Swiss School of Business and Management, Geneva, Switzerland.

I certify that I have been told of the confidentiality of information collected for this research and the anonymity of my participation; that I have been given satisfactory answers to my inquiries concerning research procedures and other matters; and that I have been advised that I am free to withdraw my consent and to discontinue participation in the research or activity at any time without prejudice. I agree to participate in one or more electronically recorded interviews for this research. I understand that such interviews and related materials will be kept completely anonymous and that the results of this study may be published in any form that may serve its best.

I agree that any information obtained from this research may be used in any way thought best for this study

.....

Signature of Interviewee

.....

Date

APPENDIX C
INTERVIEW GUIDE

COST BENEFITS ANALYSIS: NUTRITIOUS FOOD AS MEDICATION IN HEALTHCARE INSURANCE COVERAGE The face-to-face interviews will begin with introductions and an overview of the topic.

- A. I will advise the participants I am sensitive to their time and thank them for agreeing to participate in the study.
- B. I will remind the participants of the recorded interview, and the conversation we are about to have will remain strictly confidential.
- C. I will turn on the recorder, and will announce to participant's identifying code, as well as the date and time of the interview.
- D. The interview will last approximately 30 minutes to obtain responses for Thirteen interview questions and follow-up questions.
- E. I will also explain the concept and plan for member checking by contacting participants with transcribed data and request verification of the accuracy of collected information as soon as possible.
- F. After confirming answers recorded to the participants' satisfaction; the interview will conclude with a sincere thank you for participating in the study.