UNIVERSITY OF GHANA

DANCE IN THE MANAGEMENT OF HYPERTENSION: A CASE STUDY OF PATIENTS IN ABOKOBI HEALTH CENTRE, GA-EAST MUNICIPAL ASSEMBLY.

BY

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DECLARATION

I, Dinah Mawutor Agbayizah, hereby declare that except for references made to other people's work which have been duly acknowledged, this work is the result of my own research undertaken under supervision and that it has neither in part nor in whole been presented for another degree elsewhere.

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Dinah Mawutor Agbayizah Date

ACCEPTANCE

I hereby certify that this thesis was supervised in accordance with the procedures laid down by the University of Ghana.

…… ……..

Dr. Sylvanus Kwashie Kuwor Date

(Supervisor)

……. ……

Rev. Dr. Elias Asiama Date

(Co-Supervisor)

DEDICATION

This work is dedicated to my daughter, Sheryl Nana Afua Akyaa Asare Koramoah.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

GHS	Ghana Health Service
HBP	High Blood Pressure
IHS	International Hypertension Society
MoH	Ministry of Health
WHO	World Health Organization

ABSTRACT

The study sought to assess the role of non-pharmacological activities in the management of hypertension. Specifically, it aimed at assessing the impact of dance therapy on the management of hypertension, and the prospects of integrating it into the healthcare system. The study adopted the mixed method approach including experimental research design, using the case study of Abokobi Health Centre in the Greater Accra Region. For the quantitative part of this study, a randomized control approach was used, which comprised a test group (that underwent dance therapy sessions) and a control group that was on (alternate vital drugs). Blood pressure levels of respondents 'before' and 'after' the treatment processes for both control and test groups were tested quantitatively using paired-sample mean t-test. The findings show that the control group experienced an increase in blood pressure while the experimental group (those that participated in the dance therapy) experienced reduced blood pressure levels. The qualitative aspect of this study employed the use of in-depth interviews with the study participants and health officials. The use of dance therapy in hypertension management has prospects because of its additional strengths in terms of cultural friendliness, promotion of social interaction and cost effectiveness. However, the key challenges that may impede its adoption or integration include the availability of trained dance resource persons, resources mobilization [both financial and facilities], difficulty in running dance sessions parallel to pharmacological prescriptions, difficulty in getting patients to participate, and a possibility of stigmatization. However, the study provides key strategies to counter these potential challenges so as to enhance the integration process. From the experimental design and qualitative interviews, the study concludes that dance therapy has an impact on reducing blood pressure at a significant level therefore complementing the orthodox pharmacological treatment processes remains key. This study further argues that dance therapy approach is not only efficacious but also possesses other socio-economic dimensions that could be exploited to enhance its adoption. Key strategies to address integration challenges involves managerial support, and the adoption of an appropriate policy direction, that defines the integration process and other ramifications, a need to train healthcare professionals on the efficacies, origin, and success stories of dance therapy in hypertension management, offering a sensitization process aimed at effectively reorienting the minds of hypertensive patients towards the efficacy of dance therapy. It is also imperative to partner with key stakeholders and opinion leaders.

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Background

This chapter provides an introduction to the entire study. It encompasses the background to the study, the problem statement, the research objectives, the research questions, and significance of the study, limitations and delimitations and chapter dispositions. The chapter touches briefly on the state of hypertension in contemporary Ghana. Hypertension remains a greatest risk factor for cardiovascular complications which results in heart failure deaths, and stroke deaths (Biritwum et al, 2005). Although, traditionally, hypertension cases are treated or managed using clinical and pharmacological interventions, there is some evidence that suggests that physical activities and bodily movement therapies influence hypertension management even more effectively than the traditional pharmacological treatment process (Santos-Lozano et al, 2017). It is against this backdrop that the study set out to assess the role of non-pharmacological activities in the management of hypertension. Specifically, it investigates how dance therapy influences blood pressure levels and hypertension of patients.

Globally, hypertension has been identified as widespread and now regarded as a major public health threat. World Health Organisation (2015) posits that more than one (1) out of five (5) adults globally experience hypertensive complications. This accounts for around half (1/2) of all deaths from stroke and heart disease worldwide. Yearly, hypertension complications also account for 9.4 million deaths worldwide (Brook et

al, 2013; IHS, 2013) In developed countries, there is a significant drop in the number of people with hypertension complications mainly due to the widespread diagnostic and treatment services with low-cost medication resulting in a reduction in deaths from heart related disease (International Hypertension Society (IHS]. 2013). This is more evident in the fact that incidence of high blood pressure (HBP) in the Americas as at 2014 was 18%, as matched to 31% in 1980 showing a significant reduction in cases WHO/IHS (2015). On the contrary, developing countries, including many countries in Africa, have a high prevalence of HBP (HIS, 2013). The WHO in its 2015 report indicates that many African countries have an estimated 30% of their adult population suffering from HBP. From the above submissions, it is evident that while developed countries were experiencing a significant reduction in HBP cases the reverse is true in developing countries to which most African countries such as Ghana are not precluded. Moreover, World Health Organization, & International Society of Hypertension Writing Group (2003) reveals that, the average Blood Pressure (BP) levels that tells whether one is hypertensive or not are even much higher than the global averages in Africa as compared to others.

Studies have shown that managing hypertension can either be through pharmacological approach or non-pharmacological treatment such as therapeutic methods (Flores, 1995; Amoah, 2002; Kaholokula et al, 2017). Comparatively the non-pharmacological approach is less expensive as compared to the pharmacological (Amoah, 2002). Therefore, most of HBP patients who might be unemployed or pensioners may find it quite difficult to go through a pharmacological approach to managing the condition since it will pose a further financial burden on such

individuals. This has thus, made it more prudent for them to resort to the non-pharmacological approach which is relatively economical and patient-based. Patient-based non-pharmacological methods of care may include lifestyle measures such as dietary checks, physical activities and the use of dance (Kaholokula et al, 2017). Lifestyle measures that include diet, physical exercises and dance movements among others have the highest tendency in reducing and controlling BP in hypertensive individuals (Hagberg, Park, & Brown, 2000). Dance creates a positive mental change and also expands patients' movement repertoire by training them to control impulsivity and improve the awareness of the body through non- verbal means (Nemetz, 1995). This proves that dance therapy amongst hypertensive patients enhances the social, cognitive, emotional, and physical integration of the individual and dance as a relatively economic model in managing the incidence of hypertension is very uncompromising. This is against the backdrop that hypertension associated deaths are rapidly increasing in Ghana, and poverty plays a major role in the impact of these diseases on communities (Amoah, 2002). This makes it imperative to introduce other non-pharmacological models such as dance in managing hypertension.

In African countries, especially those which are low-income earners, hypertension distribution appears higher in urban centers than in rural areas. According to Cappuccio et al, (2004), the rate at which adults in urban Ghana are becoming more susceptible to hypertension and its associated diseases is very alarming. This study therefore adopts dance movement technique as a relative economical and patient-based strategy in managing hypertension in urban Ghana.

1.2 Problem Statement

The use of dance as a contemporary model for complementing drug-based care in managing ailments has gained concrete attention in many developed countries. The idea is that dance is recognized as therapeutic as it enhances emotional, psychological and physical integration of the body. A study conducted by Craig and Shelton (2008) suggests that regular dancing reduces the occurrence and incidence of numerous chronic conditions including cardiovascular diseases, diabetes, hypertension, over-weight, and depression. Similarly, Sherman (1997) found out that physical activity such as dance tends to increase the life span of individuals who engage in it. Dance has also been proven to be very significant in the management of many health conditions. For instance, a related study conducted by Verghese (2003) reveals that ballroom dancing is said to reduce the chances of getting dementia by 76%. Woodcock et al (2011) also postulates that increasing dance sessions from low levels to the recommended level of 30 minutes per day in about five days per week, (2.5 hours per week) of moderate activity reduces mortality by 19% while an increase to one hour every day (7 hours per week) increases the benefit to 24%. The idea is that dance presents a lots of relevance towards the management of diseases among others. Regular dance has also been shown to be very beneficial in the prevention of chronic conditions such as cardiovascular disease.

A study in Canada by Warburton et al., (2006) confirmed that there is irrefutable evidence of the effectiveness of regular physical activity in the primary and secondary prevention of severe chronic diseases such as cardiovascular disease, diabetes, cancer, hypertension, over-weight, depression and osteoporosis.

Undoubtedly, dance and other related physical activities appear to be well grounded in developed context as against developing countries notwithstanding the high rise in hypertension related mortalities in Ghana and other developing countries. Much of research has focused on other forms of physical activities such as jogging, brisk walking, gymnasium activities in managing hypertension with less emphasis on dance as creative arts technique (Hagberg, Park, & Brown, 2000; Gascón et.al., 2004). Even in these instances, the non-pharmacological management option appears not to be well mainstreamed in the Ghanaian healthcare system. There is no need overemphasizing that dance as a creative art technique in the management of hypertension has received little attention both from scholars and health practitioners in Ghana despite the clearly established efficacies of dance in managing diseases. This study therefore employs a blend of qualitative and quantitative research approach in examining the impact of dance in the management of hypertension by using Abokobi Health Centre in the GA-East Municipal Assembly in the Greater Accra Region as a case study. The case study has been structured in the objectives, research questions, and significance of the study among others to be discussed in subsequent sub-sections.

1.3 Objectives/Aims

The main objective of the study is to assess the role of non-pharmacological activities in the management of hypertension with emphasis on dance therapy using the Abokobi Health Centre as a case study. To address this broader objective, the study is underpinned by the following specific objectives.

1. To find out the effect of dance on the management of hypertension at the Abokobi Health Centre.
2. To identify the challenges that may hinder the adoption of dance therapy as a non-pharmacological strategy in the management of hypertension.
3. To suggest key strategies for incorporating dance therapy in the management of obvious risk associated with hypertension.

1.4 Research questions

In order to address the above objectives, the study has been guided by following research questions.

1. What is the effect of dance on the management of hypertension?
2. What are the challenges that may hinder the adoption of dance therapy as a non-pharmacological strategy in the management of hypertension?
3. How can we incorporate dance therapy in the management of obvious risk associated with hypertension?

1.5 Brief Methodology

The study adopted the case study design within the qualitative research approach. The case study of Abokobi Health Centre was used for the research. Within this case study, the researcher carried out an experiment to find out how dance therapy influences the management of hypertension. Here, the researcher selected ten (10) persons with hypertension and categorized them into two groups; one group was not given the normal treatment (pharmacological treatment) but dance therapy, *albeit* under regular

and periodic observations by the medical officers. The other set was given the normal pharmacological treatment process. Statistical tests were run for the test results after the process. At the end of three months, the researcher assessed the differences in both diastolic and systolic blood pressures of both groups before and after the study period. Additionally, aside the quantitative results emanating from the experimental and control group, the researcher carried out some in-depth interviews with participants to assess the effect of dance on their hypertension management processes.

1.6 Significance and justification

As hypertension is reported to be a major health condition and killer in Ghana and many other counties, both developed and developing, a study that assesses the impact of dance therapy in managing blood pressures is very relevant. The significance of the study can be assessed in terms of its contribution to literature, practice and policy making.

1.6.1 Contribution to Literature

The concept of the managing hypertension with non-pharmacological method such as dance movement technique has received very little attention by both scholars and practitioners in the Ghanaian context. This study will gather empirical evidence from a control and a test group of hypertensive patients before and after each dance session. As such, findings of this study will not only contribute to academia but also serve as a base study for future researchers within the field of non-pharmacological treatment for non-communicable diseases.

1.6.2 Contribution to Practice

Hypertension is a disease which is not curable. Medical practitioners over the decades have adopted diverse ways in managing this disease with different medications. It is also observed that physical exercise such as jogging can also be used as measures of managing the disease. Nonetheless, dancing is also a form of exercise which can be used to complement pharmacological method in the management of the disease. In this regard, the findings of this study shall inform medical practitioners on the need to incorporate dance as a non-pharmacological tool in the management of hypertension.

1.6.3 Contribution to Policy

The Ministry of Health and Ghana Health Service have oversight responsibility over the health sector within the country. Also, National Board of Professional and Technician Examination (NAPTEX) and National Accreditation Board (NAB) have an oversight responsibility over the curriculum and accreditation of tertiary institutions. The findings of this study will enlighten these governing authorities on the extent to which non-pharmacological approaches can be used by medical practitioners in handling non-communicable disease such as hypertension. This will form the basis for informing policies of these governing authorities on the need to inculcate creative dramatics with emphasis on dance within the course content of medical school students.

1.7 Scope and Limitations

The scope of the study covers the hypertension patients of the Abokobi Health Centre. However, due to resource constraints in terms of time resources and material resources, coupled with the sensitive nature of the study, the researcher could not get large sample size for a prolonged number of observations or time which could have enhanced the robustness of the outcomes. A major challenge faced by researcher was getting access to the hypertension patients as well as their informed consent.

These notwithstanding with perseverance, the researcher was able to go through all the ethical clearance processes; and was able to get voluntary participation of participants. The combination of both experimental tests and in-depth interviews has enhanced the robustness and reliability of the study findings and conclusions.

1.8 Delimitation

The study confines itself to one case, the Abokobi Health Centre to assess how dance therapy could enhance hypertension management. The study could have been enhanced further if more cases were to be involved to allow for comparative purposes. Additionally, the study would have advanced further if more sample size and perhaps different experiments were carried out to allow for comparing the different results. In spite of these, the study choice of different data collection techniques still enhances the reliability of the findings which provides perspectives for further in-depth studies.

1.9 Organization of the Chapters

This study has been organized into five chapters. Chapter one presents a general overview of the study. This chapter highlights formation on the background of the

study, the problem statement, research objectives, research questions and the outline of the study.

Chapter two is devoted to the review of literature relevant to this study. This chapter examines the definition of key concepts, the approaches to managing non-communicable diseases and the health implications of dancing as an exercise. The theoretical framework for the study is also discussed in this chapter. The chapter discusses both theoretical and empirical literature; the former is on conceptual definition and clarification whilst the latter discusses recent empirical findings and studies related to non-pharmacological strategies and medical treatment with special emphasis on dance therapy and hypertension management.

Chapter three of this study focuses on the approach and research procedure adopted in carrying out the study. It also presents reasonable justification for the adoption of particular approach or procedure. The chapter discusses and justifies the research design, sampling techniques and sample size, the data collection process and how it was analysed. The chapter concludes with an ethical consideration since the study is sensitive and involves medical conditions of people.

Chapter four of the study presents an analysis of data from a dance experiment as well as interviews with respondents and provides adequate discussion of the findings. These research findings are presented and discussed in themes to reflect the key research objectives.

The final chapter of this study presents the summary of key research findings. Based on the findings the researcher has derived useful conclusions from the study and

suggested appropriate recommendations to enhance the integration of dance therapy in the healthcare delivery system.

1.10 Definition of Concepts

For the purpose of this research, these concepts and terminologies were employed by the researcher. Hence, meanings of these concepts in the study should be restricted to these meanings.

Hypertension: This is referred to as the continuous rise in the blood pressure of an individual which reflects a deviation from the normal blood pressure of 120/80.

Dance: This is referred to as a form of activity that impacts powerfully on the physical, mental, emotional and social enhancement of a person through body movements accompanied by rhythm.

Systolic blood pressure: This is referred to as the readings in the amount of pressure in the arteries during contraction of your heart muscles.

Diastolic blood pressure: This is referred to as the readings of the amount of pressure when the heart is at rest between beat.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter contains the review of relevant literature on dance and its therapeutic characteristics and how it can be used to manage hypertension. It starts with the definition of hypertension, factors that contribute to developing high blood pressure, behavioural risk factors, definition of dance, key benefits of dance, dance therapy defined, historical antecedent of dance movement therapy, dance therapy: the Ghanaian story, therapeutic effects of dance in the management of hypertension and ends with a conceptual framework.

2.1 Conceptual Overview of Hypertension

Globally, human health has been informed by a number of factors such as age, increase in urbanization, globalization and an ever-changing lifestyle by majority of the population. This phenomenon is not peculiar to only advanced countries but also resource-constrained countries. The World Health Organization (WHO) (2015) argues that as the environment continues to change rapidly, so has there has been a paradigm shift in non-communicable disease regime such as hypertension, diabetes and chronic lung cancer diseases as juxtaposed with infectious diseases. This shift raises a lot of concern as developing countries were previously noted for the high prevalence in infectious diseases as against non-communicable diseases. The idea is that developing countries are now plagued with non-communicable diseases a phenomenon which is

often referred to as double burden of disease (Boutayeb, 2006). One of such non-communicable diseases is hypertension. It is one of the key risk factors for cardiovascular disease and usually manifests as raised blood pressure. Globally, hypertension affects billions of people resulting in heart attacks and stroke. It is also predicted that by 2025, the total number of the global population living with hypertension will increase to 1.5 billion (WHO, 2015). According to WHO (2015), the annual hypertension related mortality is about nine million and one in three (1/3) adults worldwide. To corroborate this assertion, Gaziano, Bitton, Anand, and Weinstein, (2009), also argue that hypertension is a very significant public health menace due to its strong association with morbidity, mortality and the social cost to society. Globally, hypertension appears to be not well controlled and this may account for its current high prevalence. This is evident in the fact according to World Health Organisation (2015) that incidence of hypertension in Canada is 22% out of which 6% is controlled. In Egypt, the prevalence of hypertension is 26.3% of which efforts brought 8% is under control. In China, there appears to be a similar manifestation where the prevalence of hypertension reveals 13.6% of which just about 3% is under control. Hypertension is usually referred to as a silent killer purely due to the fact that it usually comes without symptoms. Not only is it difficult to detect the symptoms of hypertension but it is also very difficult to diagnose.

As has been argued by Boutayeb, (2006), hypertension is a severe public health phenomenon world over, because it is largely connected to cardiovascular disease and

both of these are causers of mortality (He et *al*, 2009). In this section, the study discusses the conceptual overview of hypertension.

Over the years, the definition of hypertension has undergone drastic changes in order to stimulate understanding. Kearney et *al* (2004) argue that hypertension refers to a blood pressure that exceeds 140/90 mm Hg, which continues to affect and afflicts numerous humans in every country. This appears to be consistent with definition prescribed by WHO (2015 p.17) which states that "hypertension is defined as a systolic blood pressure equal to or above 140 mm Hg and/or diastolic blood pressure equal to or above 90 mm Hg". Hypertension and high blood pressure (BP) are used interchangeably with each other referring to the same phenomenon (WHO, 2015; Liu, 2016). By way of clarifying the definitions for hypertension, WHO, (2015) opines that anytime the heart beats blood is transported form the heart to all vessels in the body, therefore high blood pressure hypertension is said to have occurred when there is force in pumping blood through the walls of the arteries by the heart. That is a situation where the blood vessels have continuously raised pressure as a result of pushing blood to the vessels. WHO, (2015) further stipulates that the more there is pressure on the blood vessels the harder the heart will have to function in or pump blood to the other parts of the body. Cunha et al., (2011) also posits that hypertension is said to be present when there is undue delay or abnormal pressure on the arteries. The argument is that there is hypertension when there is persistent force exerted within the walls of the arteries when circulating blood throughout the body. This appears to be consistent with the definition provided by Hengwattana, (2001) which noted that hypertension is the pressure exerted on the arteries' walls whenever the heart is at rest and filling with

blood. Addo (2006) also reveals that even though the definition of hypertension remains arbitrary, it can be conceptualized as the height of blood pressure (BP) which demands treatment at all levels. By way of operationalizing the meaning of hypertension for easy comprehension, hypertension can be defined as a continuous rise in the blood pressure of an individual which reflects a deviation from the normal blood pressure of 120/80.

2.2 Factors that Contribute to the Development of High Blood Pressure and its Complications

Hypertension can be categorized under two broad classes. That is primary and secondary hypertension. Buabeng, Matowe, and Plange-Rhule, (2004) report that majority of high blood pressure patients suffer from primary hypertension. It is said that 95% of individuals living with hypertension can be associated with the primary category. Primary hypertension has been closely associated with the behavioural style of people. In other words, the social determiners and drivers serve as major causal factors for the disease. The age of a person, individuals with high level of salt intake, individuals feeding on low potassium diet, lifestyles that do not include exercise, progressive stress among others serve as contributory factors to hypertension (Bosu, 2010). In much the same way, Liu et al., (2016) added that family history tends to also deepen individuals' susceptibility to primary hypertension. Moreover, Yoshida et al., (2016) categorically stated that hypertension resulting from sedentary lifestyle and behavioural factors leads to primary hypertension. On the other hand, hypertension resulting from another disorder or the rippling effect of medication can be said to be a

secondary hypertension or secondary high blood pressure. Secondary hypertension manifests in disorders such as renal failures among others and may account for 5%-10% of the hypertensive cases recorded (Cunha et al., 2011).

2.2.1 Behavioural Risk Factors

Behavioural risk factors to hypertension are influenced by a plethora of social determinants of health, and social determinants such as income, unemployment, urbanization, and age. Mensah, (2008) opines that unemployment or fear of not being employed has resulted in many individuals developing high blood pressure and accumulating excessive blood pressure than the body can handle. Yoshida et al., (2016) also affirms this position by adding that harsh economic condition has contributed enormously towards raised blood pressure in many young adults. The argument is that the stress of individuals begins to rise beyond expectation when there is uncertainty in securing employment opportunities. The rationale of the behavioural risk factor argument is that the life style of a person is a '*sine qua non'* in other words a necessary condition for hypertension development in that person. That is, a better lifestyle will reduce the prevalence of hypertension or high blood pressure in the population.

2.2.1.1 Dietary Intake

The dietary behaviour of individuals is very important in terms of hypertension development. Consumption of food containing too much salt and fat, and not eating enough fruit and vegetables, consumption pattern and lifestyle tend to increase a

person's susceptibility to high blood pressure. Crump, Sundquist, Winkleby and Sundquist, (2016) argue that dietary habits of an individual can propel hypertension or otherwise in the person. Individuals who consume more fruits, vegetable, fish among others are said to be well guarded against hypertension among others. Black and Hawk, (2005) assert that modifying the dietary intake of fat reduces the amount of saturated fats and enhanced polyunsaturated fats which engenders a reduced level of blood pressure. The argument here is that dietary modification is an integral mechanism for reducing a person's susceptibility to hypertension.

2.2.1.2 Excessive Alcohol Intake

Amoah, (2002) reveals that harmful levels of alcohol use can be very detrimental as it may worsen the blood pressure level of a person therefore making the individual hypertensive. To corroborate this argument, Black and Hawk, (2005) highlights that by consuming beyond one (1) ounce of alcohol in a day increases the chances of a person contracting or developing hypertension. In terms of hypertension management, alcohol intake beyond a threshold creates a poor adherence to blood pressure management. This also appears to be consistent with the position of Klatsky and Gunderson, (2008) that excessive alcohol intake presents the commonest cause of irreversible management of hypertension.

2.2.1.3 Physical Inactivity

Magne, Lancellotti, & Piérard, (2010) reveal that hypertension appears to be a function of physical activity and regular exercises or otherwise. It is revealed through

various studies that physical inactiveness among people is a predisposition factor which makes them vulnerable or susceptible to hypertension. Consequently, an independent factor that is ideal for managing hypertension involves a regular amount of physical activities and bodily movements as it is an approach to controlling and managing hypertension (Whelton et al., 2002). The rationale here is that individuals who engage in regular exercising of their body have the lowest tendency of developing hypertension. On the other hand, people who fail to observe exercise as a routine or timely venture are more likely to be susceptible to hypertension and its related health conundrums (Wallace, 2003). This is also against the backdrop that the cardiovascular condition gains a considerable level of physical fitness when a regular program of exercise is performed. The logical prognosis here is that regular exercise in clients who are obese hypertensive stimulates weight reduction and further reduces the risk of developing a cardiovascular disease in the body. Also, Awuah et al., (2014) opined that blood pressure in hypertension is minimised when there is a heightened level of exercise in hypertensive patients. Regular exercise engenders wellbeing and diminishes emotional tension which may lead to hypertension in individuals. Wallace, (2003) further posited that a frequency of not less than three exercise sessions weekly as a minimum can engender blood pressure reduction in hypertensive patients. Similarly, more exercise per week depending on the frequencies can produce greater results with respect to blood pressure reductions.

2.2.1.4 Poor Stress Management

Kulkarni, et al., (1998) postulates that hypertension can be caused through recurrent blood pressure rises. The position is that, high levels of stress stimulates the human nervous system to produce high levels of vasoconstriction hormones which makes a person more susceptible to blood pressure (Makino et al., 2002). In a bid to evaluate the differences between urban related stress and its contribution towards hypertension development, Agyemang, (2006) reveals that heightened stress, coupled with a reduction traditional social support systems in urban areas tends to increase risk to hypertension. In developing African communities, he further argued that the increase in globalization and its associated desire for western food and increase stress levels due to reduced community support as a result of urbanization appears to be the leading factor for hypertension development in Ghana.

2.3 Managing Hypertension: A Paradox

The severity of its implications is such that any hypertension patient who fails to continue his prescribed pharmacological medication or discontinues with a drug therapist as prescribed has a higher chance of contracting cardiovascular medical implication through unregulated blood pressure levels (see Williams et *al.*, 2004). What appears paradoxical is that too much intake of drugs and medications also has their associated health complications (Yusuff & Balogun, 2005).

Observing dilemma faced, Choudhry et al., (2007) suggest that an appropriate response or treatment process is a one that effectively manages hypertension by using

fewer drug therapy. This is against a backdrop that multiple pharmacological treatment approach is largely shrouded with possible risk factors; including inter alia, adverse effect from drug reaction and interactions, consequence on comorbid situation as well as the cost of these pharmacological drugs which cause severe financial cost on patients (Yusuff & Balogun, 2005).

Addressing this paradox makes the role of non-pharmacological treatment processes as quite relevant in complementing the orthodox drug treatment process. With this as a supplementary or complementary approach, hypertension patients would have their blood pressure levels regularly controlled with the least drugs possible and occurrences.

An acceptable non-pharmacological hypertension management process is dance therapy (Mancia et al., 2007). Research has shown that particular dance movements for a sustained period are able to help patients' BP levels controlled. For instance, aerobic dance movements caused a reduction in systolic blood pressure by 6.9mm Hg and diastolic by 4.9mm Hg (see; Cornelissen & Fagard, 2005). This has been discussed adequately in subsequent sections.

2.4 Hypertension in Ghana

Hypertension is a severe public health phenomenon world over, because it is largely connected to cardiovascular disease and both of these are causers of mortality (He et *al.*, 2009). Hypertension continues to be a significant public health issue not only in advanced countries but more importantly in least developed countries like Ghana

(Kearney et al., 2004). In Ghana, Nulu et al., (2016) suggest that this is even more pathetic as hypertension continues to be the second highest cause of outpatient morbidity. In furtherance to that it is argued that hypertension is the foremost risk factor contributing to worldwide morbidity and mortality resulting in numerous deaths even than over-weight in Ghana. Studies conducted in 2003 reveals that hypertension prevalence rates of 28.3% and in Kumasi and Accra. Similarly, the same study conducted in 2004 in Accra and Kumasi indicates that 8.7% of the population are hypertensive. This makes it more imperative to consolidate attention on managing the canker (Amoah, 2003; Cappuccio et al., 2004)

Cook-Huynh et *al*., (2012) noted that not until recent times, hypertension was considered as unusual in Africa. This notwithstanding has witnessed a paradigm shift as the prevalence of hypertension appears to be widely evident and reported within Africa in recent times. Addo, (2013) asserted that Africa has recently recorded a high cardiovascular ailment. Colbourne et *al.,* (1950) revealed that as of 1950, cardiovascular disease prevalence was measured as 5.5% in Ghana. This remains very worrying as Ghana appears to record high levels of this menace (Mensah, 2008)

2.5 Management of hypertension in Ghana

McManus et, *al*., (2010), averred that hypertension remains a chronic disease with numerous complications inherent. In order to manage this ailment, there are two main remedies available for patients. These are pharmacological and non-pharmacological management practices. Whereas the pharmacological sphere involves the use of pharmaceutically prescribed and tested drugs and prescriptions, the latter encompasses

lifestyle modifications with dance at the centre of the routine exercises. As noted by D'Amico et al., (1998), pharmacological treatment of hypertension is usually evidenced based and more scientific. Aside being difficult, it is also expensive and very unbearable for hypertensive patients with poor financial background (Dickinson et *al.*, 2006). They further posited that a complementarity system where both pharmacological and non-pharmacological modes of treatment are used tend to serve as a panacea for engendering a reduced blood pressure.

Liao et al., (2016) also rejuvenate the debate by adding that the difficulty in achieving reduced blood pressure is still prevalent despite the substantial advances for pharmaceutical interventions. It is further argued that, not only is a complementarity of paradigms (both pharmacological and non-pharmacological) necessary but also provides enough justification for a shift for a non-pharmacological model (Börjesson, et al., 2016). The idea is that a pharmacological intervention, which serves as a sole medium for managing hypertension, appears to be less productive. A phenomenon which makes it imperative to device complementing strategies such as non-pharmacological interventions or a complementarity of the two interventions in order to attain the required results.

For far too long, Ghana like many developing African countries has consistently adopted pharmacological interventions for managing hypertension. Buabeng, Matowe and Plange-Rhule, (2004) indicated that this approach alone tends not to be effective due to the economic challenges saddled with most families suffering from hypertension. The rationale is that the cost for managing hypertension through

pharmacological intervention is very unbearable for many hypertensive patients. This has therefore called for other alternatives such as the non-pharmacological measures. The argument is that hypertensive patients who persistently observe a weight-reducing diet, take regular exercise such as dance, and restrict alcohol and salt intake are more likely to record a reduction in their elevated blood pressure.

Similarly, Awuah et al. (2014) rehashed the relevance of non-pharmacological intervention to hypertension treatment even more than pharmacological method; they contend that it presents a unique intervention to reducing blood pressure. Non-pharmacological interventions otherwise referred to as 'lifestyle measures' are manifested through regular exercising of the body, consuming healthy foods such as more fruits and vegetables, quitting smoking and excessive ethanol intake, and a reduced salt intake. According to Black and Hawk, (2005), a continued medication of lifestyle of hypertensive patients can cause a reduction in the daily dosage of the normal medications required for hypertension treatment. This position reiterates the uncompromising nature of the non-pharmacological interventions. Through lifestyle modifications, hypertensive patients also reduce their risk of developing further complications such as heart attacks, stroke and diabetes among many others.

2.6 Conceptualizing Dance

As the need to manage particular diseases such as BP levels heightens, the use of physical exercises such as dance has been advanced by medical scholars and medical practitioners. The concept of dance is a physical activity involving a choreographed routine of bodily movements usually performed to sound. When dancing in a low

impact routine, one of the feet ought to be in contact with the ground at all times to provide firmness (Dowdy et *al*., 1985). Research has provided enough empirical evidence that particular dance routines [particularly aerobic dance] pose some physiological effects, especially in managing and controlling the blood pressure levels among patients.

Balgaonkar, (2010) demonstrates that dance is the most basic component of the arts which encompasses direct expression through the human body. As indicated by Sokpor (2016 p. 7), dance is defined as the ‘‘expressions of physical, psychological and spiritual emotions to communicate ideas’’. The idea is that through dance, participants are able to physically communicate ideas with other people. Psychologically, dance affords dancers the avenue to develop their psychological make-up which engenders wellbeing of the entire body. In terms of the spiritual make-up of a person, dance enables people to relate with their creator and other spiritual beings. The argument here is that dance offers a myriad of opportunities with health as the pinnacle. Through dance, people are able to show thoughts and emotions which may either be pleasant or unpleasant.

Opoku (2011) noted that dance conveys feelings, thoughts, reflections, reverence, opinions or information which may be positive or negative. Dance can therefore be conceptualized as a form of activity that impacts powerfully on the physical, mental, emotional and social enhancement of a person. Dance is also a multi-cultural tool which enhances general wellbeing. The rationale is that no particular culture or ethnic group can claim monopoly over dance, hence it serve as a universal therapy for everyone. The cultural-friendliness of dance is manifested in the fact that all cultural

groupings engage in dance as part of their accepted norms in their communities. The therapeutic effect of dance lies in the fact that it enhances social cohesion among people. Dance is the making of rhythmical steps and movements for their own sake. Evidence from Hanna, (1995) suggests that dance encompasses the culturally mediated body, emotion, and mind which enhance wellbeing of the body through a strengthened immune system. Dance serves as a medium to balance, understand and coordinate the human body. Over the years, dance has been recognized for its ability to entertain and also for its cultural preservative purposes, however, stemming from some few decades back, researchers such as (Filippidis et al, 2014; Stuckey & Nobel, 2010; Shigematsu et al., 2002) have been exploring the health impacts of dance.

2.6.1 Benefits of Dance

As a tool for enhancing health, dance offers a number of benefits. These benefits range from physical and mental, personal and social and educational among others. (Stuckey & Nobel, 2010) noted that dance significantly helps in healing emotional injuries, elevates ones understanding about him and others, stimulates self-reflection, reduce symptoms, enables people to modify their thinking process and also behaviours. In terms of physical and mental impact of dance, the following are revealed: Dance enhances the functioning of the mental faculty of the body, it engenders physical functioning of the entire body; boosts the healthier performance of the heart and lungs; dance strengthens the bones and reduces risk of other diseases; dance creates an enabling atmosphere for better coordination and agility of the body (Art Council of England, 2006).

In terms of personal and social enhancement of the body through dance, the following benefits are realised: Dance enhances the psychological and general well-being of the human body; through dance, self-confidence and self-esteem of a person is enriched; and it better reduces a person's social exclusion and isolation tendencies.

Similarly, the role of dance in educating people against behavioural change cannot be downplayed. Dance can serve as tool for educating people on alcohol abuse, sedentary lifestyle, and bad eating habits among other risk factors to hypertension.

Shigematsu et al. (2002) present an empirical finding from Japan which reports that a 12-week dance-based aerobic therapy carried out for sampled patients caused an improvement in their health status at the end of the period including a reduction in the resting heart rate and the blood pressure levels (see also Adiputra et *al.,* 1996). This suggests that dance therapy or regulated bodily movement has impact on reducing the risk associated with high blood pressure.

The role of physical bodily movements, especially dance therapy in the treatment of acute medical conditions is a widely known phenomenon. There have been various empirical studies that report on this. An empirical study by Burke et al., (1992) sought to examine the relationship between this lifestyle [physical body activities] and blood pressure levels among people. These scholars carried out an empirical study through a cross-sectional survey involving 843 ranging between 60 to 87 years. Adopting a stepwise multiple regression test, the results revealed that higher blood pressure was associated with greater body mass index (BMI), it also found out that increased

physical activity was negatively related to blood pressure. This study suggests that physical activities, especially supervised dance therapy through specific body movements have a medical effect, at least in the reduction of blood pressure levels, and for that matter, essential in the treatment of hypertension among patients.

Pescatello et al., (2015) researched the efficacy of dance movements in hypertension management by carrying out an in-depth review and critique of the 8th Joint National Committee guideline on how to control hypertension and high blood pressures among older people. The authors report that rather than providing some specific recommendation as previous guidelines had done, the current [Eighth] Joint National Committee validated the recommendations of the American Heart Association 2013 Lifestyle Work Group (LWG). The postulations by the LWG that received endorsement by the Eighth Joint National Committee argues with high emphasis or confidence [rated as "high"] that aerobic exercise [dance therapy] causes a reduction in blood pressure levels by between 1 to 5 mm Hg in individuals with hypertension; the report further maintains that most efficacious bodily movement interventions involve aerobic physical activity with substantive duration for at least a three-month period, with 3 to 4 sessions per week and each session a duration of about 40 minutes. Their argument does not water down the relevance of pharmacological treatment, it however encourages individuals and patients to resort to non-pharmacological treatment processes and possibly augment it with the former.

2.7 Dance/Movement Therapy Defined

Globally, the therapeutic effects of dance have been highlighted by many scholars (see; Hanna, 1995; Berrol, 1990; El Guindy & Schmais, 1994; Balgaonkar, 2010). Art Council of England, (2006) reveals that dance offers numerous of social, physical and creative health and well-being. The argument is that, the therapeutic inclinations of dance can never be underestimated under any circumstance. Thus, dance presents an appropriate and strong model for therapy. The American Dance Therapy Association, (2009) opines that dance movement therapy is the psychotherapeutic approach where dance movements are utilised as a process to improve the, emotional, physical, mental and the social integration of an individual. According to Levy, (1988), dance movement therapy is the use of dance and movement which enables the body to reflect in inner emotional state, and changes in movement behaviour can lead to changes in the psyche, thus promoting health and growth. Goodill (2005) describes dance movement therapy as a speciality discipline and compares it to other creative therapies such as music, art, drama and poetry. Goodill (2005) continues to argue that since the 1970's the world has witnessed a continuous interest for clinicians to explore dance movement therapy for clients with various mental concerns.

Dance movement therapy is different from teaching dance, the emphasis of dance movement therapy is not to teach dance but a professional who uses dance for healing purposes (therapist) involves clients through a movements process with the intentions of enhancing the health of the clients (Wennerstand, 2008). Spindell, (1996) also noted that dance movement therapy is different from standard exercise or movement programs in the sense that it is designed to inspire creativity and a sense of wholeness

in the clients and this helps to promote feelings of essential wellbeing. Gladdings, (1998) also indicates that dance movement therapy instils in clients a greater sense of body and awareness and broadens a range of flexibility and a more profound and healthier meaning of personal interactions with other individuals.

The position is that, through dance/movement therapy, the physical functioning, feelings, behaviour and cognition of an individual is impacted (Balgaonkar, 2010). This is against the backdrop that the body and mind are intractably intertwined. Dance/movement therapy is also understood to be movements that stimulate the spiritual, emotional, social and cognitive integration of an individual. The rationale is that dance movement offers numerous physical and emotional benefits to people who engage in it and more importantly because it is one of the best modes of exercising (Balgaonkar, 2010).

2.8 Historical Antecedent of Dance Movement Therapy: Global Perspectives

Dance has evolved over the years and it is still evolving. Dance is used in various occasions such as naming ceremonies, puberty rites, marriage ceremonies, funerals just to mention but a few. In all of this, the dance movement speaks in a way to the people involved because the movements express gestures of joy, sorrow, mixed feelings and many other emotions are expressed through dance. In the 1900s, dance begun to serve therapeutic purposes. One may argue that dance has served therapeutic purposes before the 1900s but nothing has been said about that. Studies have shown that it was in the 1900's that dance movement therapy started and has existed till date (Levy, 1988; Chodorow, 1991). Dance experts and therapy pioneers in one way or the

other recognised the benefits of using dance as a psychotherapeutic technique (Levy, 1988).

Traditionally, dance, music, art and medicine were commonly linked in diverse ways. Early dance therapists such as Marian Chace, Blache Evan and Trudi Schroop were modern dancers. Modern dance enables one to feel very comfortable with one's self as he or she dances to develop one's own style, improvise, excites oneself as he or she expresses himself or herself through movements. By 1940s dance movement therapy has been accepted by more people and the therapist used dance as a healing art and helped patients realise their own ability to get healed by themselves even before the contemporary medicine discovered the benefits of the mind/ body connections (Wennerstand, 2008). Chodorow, (1991) indicate that, the idea of dance therapy as a psychotherapy was first recorded by Carl Gustav Tung in 1916. His paper was not published until 1957 but was distributed. There are a lot of people practicing dance therapy today but there are some pioneers that contributed to the development of dance movement therapy. The first person to have used dance movement therapy was Marian Chace. Studies have shown that she used it in the mental health setting where she was invited to function together with experts from World War II who were stationed at the St Elisabeth hospital in the USA capital-Washington DC. She used improvisation, body movement and imagination to bring the body and mind together (Payne, 2000).

In 1947, she was made the first full time dance therapist and in 1966, she pioneered the formation of The American Dance Therapy Association for national and international recognition and the development of dance therapy services and training.

Marian Chace became the first president for two years prior to her retirement but still continued to perform dance therapy until her demise in 1970.

Trudi Schoop is yet another pioneer of dance therapy who hailed from the west coast of Zurich, Switzerland. She started work in a facility with Schizophrenic patients in 1947 (Chodorow, 1991). She pioneered in the combination of comedy and dance and her theory is arranged around the idea that one's posture and muscle usage illustrates a reflection of one's mental state as well as emotions and it is due to having a direct connection with body movement (Levy, 1988). According to Payne, (1999), Schoop was always willing to explore playful, expressive and interactive experiences with her clients and in turn, they become her contributions to Dance Movement Therapy.

Mary Whitehouse created the authentic movement an aspect of dance movement therapy that involves deep inner listening and expressive movements (Chodorow, 1991). In 1993, the authentic movement institute was formed. In 1993, the office of Alternative Medicine which is also a sub-agency of the National Institute of Health offered one of its experimental grants for research on dance therapy for helping clients with medical illness (ADTA, 2016). In that same year, the national center for complementary and alternative medicine of the institute of health awarded the ADTA research grants to investigate the role of Dance movement therapy on medical illness.

2.9 Dance Therapy: The Ghanaian Story

Over the years the dynamics of healing through dance has undergone a major revolution in Ghana. That is the Ghanaian dance therapy story presents an odyssey of actions and occurrence aimed at better strengthening the workforce of the country

(Penniman, 2002). The history of dance as a tool for healing dates back to pre-colonial days when traditional healers used dance and music in their healing processes. Dance reflects an inseparable portion of the traditional African religion in Ghana. Through this intervention, dance and music were used as a potent tool to heal the sick among others. As argued by Amenowode, (2002) healing in Ghana is not just situation of taking a medicine that you feel can cure the ailment, but a pile of complex processes with interactions from the society and people. This process ends up strengthening the physical architecture, enhancing the emotions, encouraging the spiritual make-up and others. Penniman, (2002) opines that healing through dance within the Ghanaian context has never been the preserve of a particular ethnic group. In other words, all ethnic groupings have their own dance that is used to cater for people in terms of ailments. However, the paradigm shift lies in the fact that healing through dance no longer happens only within the traditional African Religion where the ancestors and gods are consulted through dance and music. The argument is that, there is now a renaissance of dance for managing ailments without the process dwelling predominantly on the gods or ancestors. The rationale is that dance therapy within the modern Ghanaian context does not rely predominantly on a specific mythical or spiritual underpinning. That is people without any spiritual inclinations can now conveniently engage in dance for healing purposes once the person study some dance movements or steps.

2.10 Therapeutic Effects of Dance in the Management of Hypertension

As the prevalence of hypertension continues to surge up, so has it become more imperative to explore other economical means of managing the conundrum. According to Information for Action (2001), this continuous increase in hypertension related mortality in Ghana is due to the unaffordable nature of the treatment process. Whereas Buabeng, et al., (2004) also buttresses this point, it is further suggested that other measures should be explored. By way of shedding light on the therapeutic effects of dance, Maruf et al., (2013) uncovered that dance as a form of exercise can never be overlooked. The authors rehashed that dance and any form of exercise presents a more sustainable means of managing hypertension.

Maruf et al., (2013) further demonstrate that there is a high tendency for aerobic dance to engender hypertension control. In a similar study, Tumwine, (2013) argues that not only does dance present an economical means of treating hypertension, he also suggests that when hypertensive patients adopt dance as a management tool, it prevents them from developing other related diseases such as stroke among others. Vainionpää et al., (2007) also studied the impact of physical activity on high blood pressure, and conclude that physical exercises such as regular dance either structured or unstructured result in high blood pressure thereby serving as a good management tool for hypertension patients.

Brandon and Elliott-Lloyd, (2006) also noted that by including regular exercises sessions with music at the background, hypertensive patients are able to better manage their blood pressure without it degenerating into other uncontrollable ailments. By

way of demonstrating the extent of contribution, Brandon & Elliott-Lloyd, (2006) further asserts that regular dance exercise lessens blood pressure by 5–7 mm Hg whenever dance exercise is performed. Farinatti et al., (2005) supported this position by adding that endurance exercise in the home even within a short term tends to impact on the blood pressure of hypertensive individuals.

A study conducted by Maruf et al., (2013) revealed that even though all forms of exercise such as swimming, walking, jogging, running on a treadmill etc. leads to a reduced blood pressure, however, the built environment and economic conditions in most African countries make dance the most practicable modality for hypertension management. In the view of Kumar, (2009) the preference of dance over other forms of exercise lies in the fact that most people see dance as a hobby which most individuals are interested in doing. Besides, dance within the Ghanaian context is a culturally-friendly, inexpensive, simple and more sustainable tool for managing ailments such as hypertension. Halm and Amoako, (2007) also revealed that dance exercise creates a congenial atmosphere for the human body to speed up its metabolizing process in hypertensive patients therefore bring the high blood pressure under control (Williams & Franklin, 2007). By way of throwing more light on the effects of dance on hypertension management, Balgaonkar, (2010) posited that dance exercise stimulates blood circulation in the body more efficiently and also causes a significant reduction in stress, reduces heart disease and enhances positive mode lift. By way of illuminating the role of dance exercise in hypertension management, Balgaonkar, (2010) further argues that regular dance activities prevent high blood pressure and varicose veins. An empirical study conducted by Duhovska, and Paipare,

(2009) involving a control and test group to examine the impact of dance/movement therapy in hypertension showed that there was a statistically significant relationship between dance/movement therapy and hypertension treatment. The study also concluded that dance serves as an effective tool for enhancing cardiovascular parameters and also improves the estimated maximum oxygen intake in patients with high blood pressure (hypertension). The foregoing point above has been forcefully brought home by Hagberg et *al*., (2000) who argue that about 75% of hypertensive patient experience a decrease in their blood pressure as a result of dance exercise training.

The study further indicates that these decreases were noted with systolic and diastolic Blood Pressure and the magnitude of reductions are approximately 11 and 8mm Hg, on the average respectively. The evidence further shows that with respect to gender and response to treatment through dance, it was revealed that women respond better and faster to blood pressure reduction through dance exercise than men. The rationale is that non-pharmacological interventions in managing hypertension present a very positive image about the treatment process. Therefore, in developing countries where most people are financially constrained in assessing healthcare, most of these patients can opt for a non-pharmacological intervention like dance if well incorporated into the healthcare system with trained instructors.

Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure 6th report (1997) shows that approximately 90% of hypertensive people who have mild to moderate increase in their blood pressure will have to engage in one form of exercise or the other like dance in order to properly manage their

ailment. This further illuminates the urgency for non-pharmacological interventions such as dance in managing hypertension.

Dance/movement therapy also tends to reduce anxiety and depressed mood in hypertensive patients. As stated by Bartholomew & Miller, (2002), dance/movements in enhances increased positive and decreased negative affect on mood. The rationale is that, through dancing sessions, the mood of hypertensive patients are elevated thereby reducing depressing which has the tendency of worsening their hypertension level. Moreover, a survey of by Murcia et al., (2010) involving 495 adults who have no profession closer to dancing revealed numerous benefits of dance including a feeling of greater happiness and excitement and fewer negative views of dance in managing hypertension. This underscores the need to shed more light on the therapeutic effects of dance in the treatment of hypertension.

2.11 Theoretical Framework- Gestalt Theory

The study is underpinned by the Gestalt theory as developed by Fritz Perls, Laura Pels, together with Paul Goodman around 1940s (Perls, 1976). Broadly, this theory argues that there are other humanistic models or strategies that serve as alternatives to the conventional mode of healing. This study applies Gestalt's theory by employing the use of dance therapy to manage hypertension among individuals. Central to the principles of Gestalt theory is the claim that person-centered therapy is a necessary and more sustainable path for human therapy.

Employing this theory in this study allowed hypertensive patients to use non-pharmacological means to manage hypertension. Using non-pharmacological interventions such as dance therapy, there is the use of an unconditional acceptance to treatment and patient centered therapeutic processes to enhance the outcomes of the therapy process. This theory also emphasises on the use of empathy as a therapeutic tool in managing an ailment (Yontef & Jacobs, 2008). This is very consistent with the use of dance as a therapeutic tool which engenders social support from other participants. Situating this theory in this study is very appropriate as patients undertake dance sessions with their peers who are also hypertensive patients hence the enabling environment to socialize before, during and after the dance sessions. This also serves as a conduit for proper interaction with other people and also to better synchronize with other participants and the background music. Gestalt theory is practiced in a way like exercise and the intuition behind the theory is to stimulate self-awareness, enhance empathy from other group members, therefore by locating this theory in the study will be deemed very fit. The rationale is that, through dance therapy actions are aroused, therefore helping in a self-centred treatment process. Therefore, by employing this theory this study uses the patient-centred approach as an alternative managing hypertension. The use of dance as a non-pharmacological intervention model for managing hypertension is the intervening strategy devised in this study. Just as in the case of Gestalt therapy theory, the hypertensive patients undergo the dance activities with the therapist who serves as a conductor whiles patients follow suit.

2.12 Conclusion

This chapter has presented a review of related literature regarding dance in the management of hypertension. The chapter started with definitions and various reviews on hypertension. It also reviewed empirical literature on dance and dance movement therapy, taking into consideration global perspectives and the Ghanaian context. The effect of dance movement on hypertension management is also highlighted in this chapter. The chapter ends with the Gestalt theory (Perls, 1976) which provides the theoretical underpinning of the study. The chapter has discussed from literature the relevance of dance therapy in the management of hypertension. It has also assessed the contextual case of Ghana and how it could be applicable to the Abokobi Madina case. The sources of literature reviewed in this chapter provides an in-depth understanding of dance therapy and its application in healthcare delivery. This review has significantly provided the researcher the level of theorization required for discussing the research phenomenon under study.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the research paradigm, research design and how the various sources of data were gathered. It also presents the sampling techniques and procedures, other specific methods of gathering data for this research as well as data analysis techniques.

3.1 Research Approach

The study adopted elements of both the quantitative and qualitative research approaches; therefore, it employed the use of mixed method approach to aid in the achievement of the research objectives (see fig. 3.1). In the view of Creswell, (2009) the mixed method approach tends to combine the strength of both qualitative and quantitative approaches to conduct a research. Quantitatively, an experimental design was carried out and statistical tests were run to test for inferences.

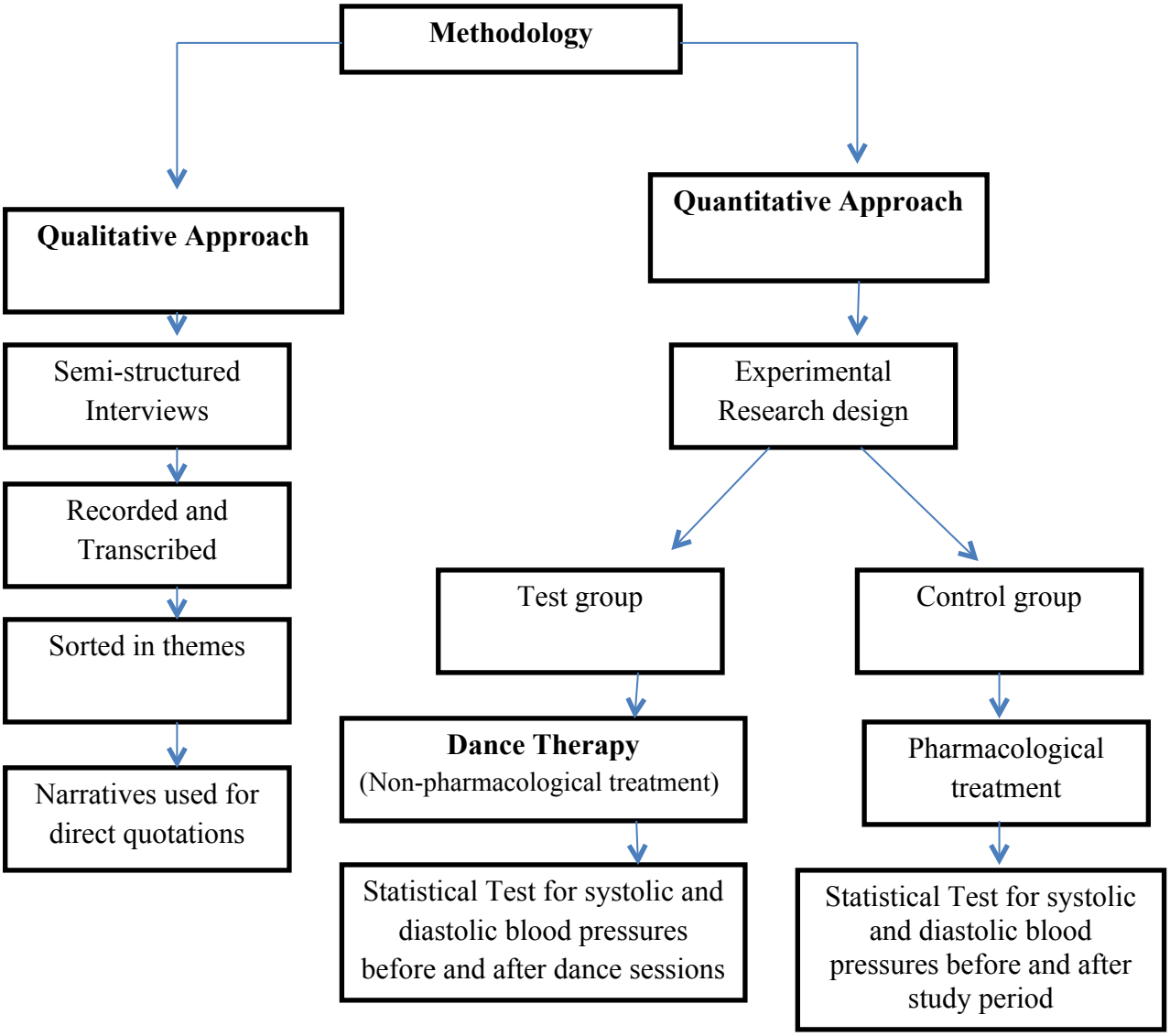
A randomized control approach was used to largely assess the main objective of the study. Through this design, a test and control group comprising hypertension patients were sampled and put to test for a four-month period. The test group went through periodic dance therapy sessions with no pharmacological treatment but given a placebo drug and under a weekly supervision by a medical doctor. The 'before' and 'after' blood pressure levels were taken for each of the four dance sessions. The control group, however, were given their normal pharmacological medication and

their blood pressure levels were taken periodically. The means of these two groups were tested using the paired sample t-test. A quantitative research approach is used to determine the extent of a problem or the existence of a relationship between aspects of a phenomenon by quantifying the variance (Boateng, 2014). With this, the body weight and blood pressure (bp) of the respondents were taken prior to and after each dance session. These patients' data was used in determining whether dance could also be used to reduce obvious risk factors such as over-weight in hypertensive patients.

The qualitative research approach was adopted to assess the second and third objectives and to complement the first objective. According to Denzin and Lincoln, (2009) this approach elicits the meaning, attitude, values and beliefs people associated with a phenomenon in order to establish a better understanding, rather than to test to either support or disprove a relationship. Patton, (2002) also defines the qualitative research as an effort to understand situations in their uniqueness as part of a particular context and the problem, issue, situation or phenomenon. This paradigm was appropriate for the study because it provided the researcher the opportunity to interact with both the patients and health practitioners during and after the dance sessions by asking questions which were more probing in nature.

The processes involved (discussed above) have been illustrated in fig 3.1 (see next page)

Fig. 3.1: Processes and approaches involved in the study as discussed above



Source: Author's Construct (2016)

3.2 Theoretical Framework

This study is framed within the Gestalt theory (Perls, 1976). This theory provides that there are other humanistic models or strategies of therapy that serve as alternatives to the conventional mode of healing. Gestalt employs the use of creative and experiential techniques such as dance therapy to manage ailments in their clients. This theory is well discussed in chapter two of the thesis.

3.3 Research Design

The research design adopted for this study was the case study. In the view of Yin, (2009) the case study design enables researchers to adopt and combine different data collection instruments involving in-depth interviews and analysis of documents. This technique also allows the researcher to interact with participants in their natural setting. With this design, the researcher was able to interact with hypertensive patients from the Abokobi Health centre.

3.4 Study Area

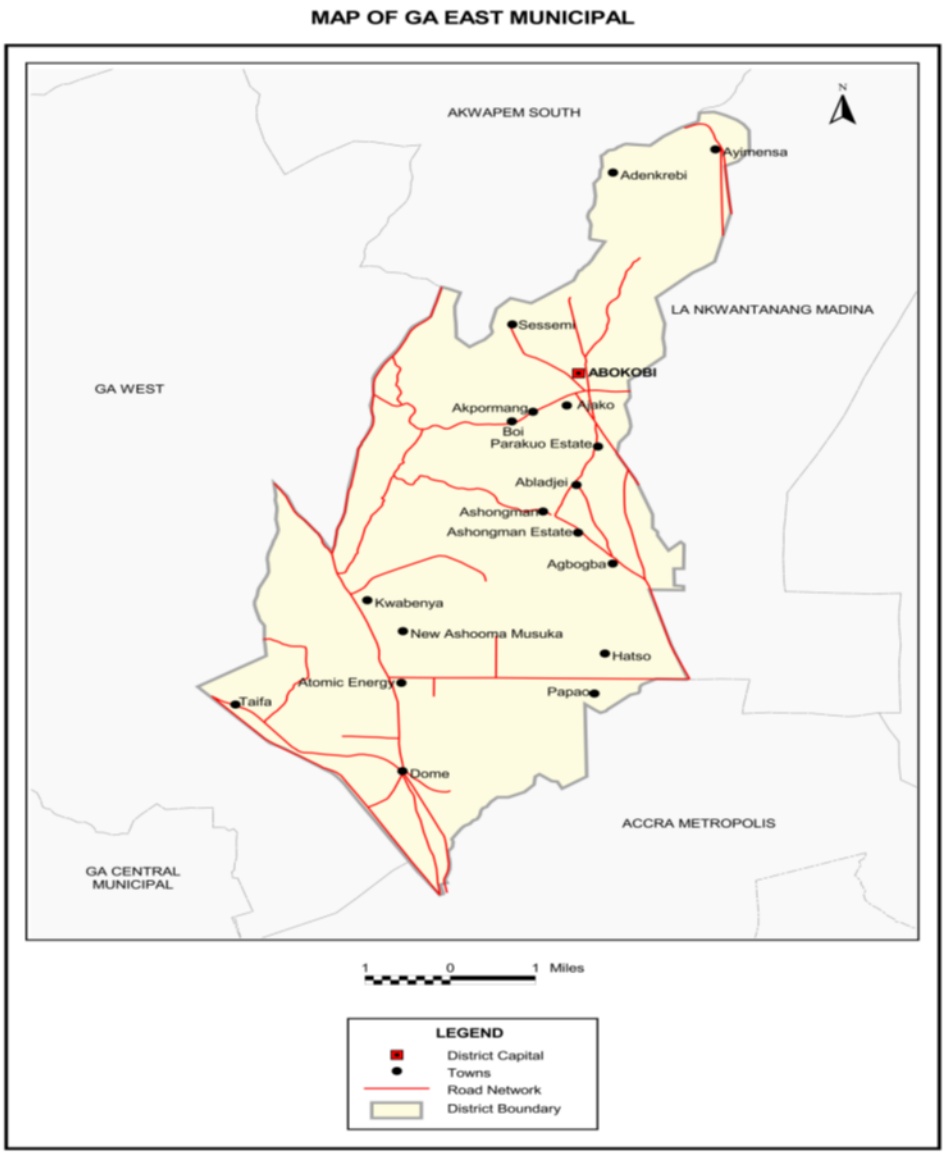
The Ga East Municipal is located at the northern part of Greater Accra Region. It is one of the Sixteen (16) Districts in the Greater Accra Region and covers a land area of about 85.7square kilometers. The capital of the Municipal is Abokobi. It shares boundaries with the Ga West Municipal to the west, the La-Kwantanang Municipal to the east, Accra Metropolitan to the south and the Akwapim South District to the north. The Municipal capital, Abokobi, is approximately 29 kilometers from the country's capital city Accra. The Ga East Municipal is sub divided into two administrative areas,

namely the Abokobi Zonal Council and the Dome Zonal Council. The Municipality is divided into four sub municipals for the organization and distribution of primary health care services. These sub municipals include Abokobi, Dome, Taifa and Haatso. Each sub municipal health management team has the responsibility of the delivery of health services to the population of their defined areas, and has either one or two community clinics.

The Municipality has about 52 settlements with about 82percentof the population living in urban areas. The remaining 18percent occupies the rural areas. Almost all the ethnic groups in Ghana exist in the district although Akans seem to have a slight majority over Gas and Ewes in that order (Ghana Statistical Service, 2014).

The Abokobi Health Center is one of the health service delivery center in the municipality. This health centre has a hypertension unit with registered patients who periodically visit the facility to seek treatment. This facility was selected due to how well its hypertension unit is organized, its proximity to the researcher and hospitability of the facility and health officers.

Fig 3.2: Map of study area



Source: Ghana Statistical Service (2010)

3.5 Types and sources of Data

According to Boateng, (2014) researchers tend to fairly agree on the forms of data to be used for a qualitative study. Patton, (2002) identifies three kinds of data collection for a qualitative study. These include in-depth interview (open ended interviews);

direct observation and written documents. This point is supported by Creswell, (2012) by adding audio-visual as fourth form of data for qualitative study. These sources or forms of data can be classified into two major categories (primary and secondary). As such this study used two main sources, both primary and secondary sources.

Secondary data was of immense use in the study and came from hospital reports and bulletins from the Ministry of Health and the Ghana Health Service including those from internet sources.

Primary data included those elicited from hypertensive patients and key health and administrative personnel sampled from the Abokobi Health centre. Secondary data involved the medical history of these patients. The use of both primary and secondary sources of data was to enable verification of data and cross examination to enhance the reliability of data and research findings.

3.6 Sampling Process

Boateng, (2014) defines sampling as the process of selecting from a group or population to become the foundation for studying in order to obtain data to address a research problem. In Social Science Research, the appropriate key respondents who will be able to provide the requisite or relevant information necessary to achieve the objectives of the study.

For the purposes of the study, two sampling techniques were used. These are the purposive sampling and the random sampling technique. The purposive sampling techniques ensures the selection of an experienced individual based on the researcher's

judgment about some appropriate characteristics required of the sample (Zikmund, 2003). Similarly, Teddlie and Yu, (2007) indicate that purposive sampling techniques are primarily used in qualitative studies and may be defined as selecting units (e.g., individuals, groups of individuals, institutions) based on specific purposes associated with answering a research study's questions. The purposive sampling technique therefore enabled the researcher to select hypertensive patients from the Abokobi Health Center for the study.

The random sampling technique according to Teddlie & Yu, (2007) is perhaps the most well-known of all sampling strategies. A simple random sample is one which each unit in the accessible population has an equal chance of being included in the sample, and the probability of a unit being selected is not affected by the selection of other units from the accessible population (Teddlie & Yu, 2007). From the purposively selected respondents, the random sampling was used to classify the respondents into the test and control groups for the study.

3.7 Target Population

In any research study, the study population has to be clearly defined according to particular characteristics such as age, sex, residence or geographical accessibility. The study population is defined as the total members of a defined class of people, objects, places or events selected because they are relevant to your research question.

Burns and Grove, (2011) define the target population of a study as the entire aggregation of the respondents that meet the designated set of criteria. For the purpose

of this study, the target population consisted of the medical practitioners and administrators at the Abokobi Health Center as well as hypertensive patients.

3.8 Sample Size

Determining the sample size is a very important issue because samples that are too large may waste time, resources and money while the samples that are too small may lead to inaccurate results.

According to De Vaus, (2001) the case study is a kind of descriptive research in which an in-depth investigation of an individual, group, event, community or institution is conducted. The strength of the case study approach is its depth, rather than its breadth meaning reasonable and manageable sample size is required. Hence the study selected seventeen (17) participants as its sample size. Ten (10) of these were hypertension patients who were stratified into two groups (test and control group) with each group consisting of 5 respondents. The seven (7) additional participants were medical practitioners including nurses at the Abokobi Health Centre as well as administrators.

3.9 Research Processes

The study had a test group and control group. The respondents in the test group were made to undergo a 13-week dance therapy whereas the respondents in the control group were given the normal routine hypertension drug treatment therapy. The respondents in the test group were provided with alternate medication to prevent any side effect which could potentially arise as a result of cessation from their regular hypertension medications. The patients were under the strict supervision of a designated medical officer and each of them were made to attend regular check-ups at

least once a week to enhance the early detection and treatment of any complications that may arise. In the course of the experimental process, the blood pressure levels of patients were clinically assessed by a medical practitioner, this same process was done, after the dance sessions. The processes and dance movements illustrated in chapter four.

3.10 Data Collection Tools

Primarily, clinical methods were used to solicit for primary data for the study. The method was used to elicit information on the medical records of the respondents before and after the treatment processes for both control and test groups. This was facilitated by a medical practitioner. Dance sessions were conducted by a dance professional Asare Newman, a Senior Lecturer from the Dance Department, School of Performing Arts, University of Ghana and all of these facilitated by the researcher. Mr. Asare Newman's dance movement technique was adopted by the researcher as her module for the study. The dance sessions were conducted twice a week. Each dance session was conducted between forty-five (45) minutes to one (1) hour using dance movements from the Ghanaian and African traditional dance and contemporary dance movements.

Additionally, a well-structured interview guide was used to facilitate interviews with patients who undertook the dance therapy session as well as the seven (7) medical practitioners. This was done to obtain detailed understanding of how the dance movements affect their health and physical conditions.

3.11 Data Management

The data collected through the use of interviews were recorded using an audio recorder and transcribed. The transcribed data was read over to identify cross cutting themes which were used as basis for the analysis. Also, the researcher made use of direct quotations and narratives from some of the respondents to support the findings and arguments.

The simple T-test which is a Statistical test was run using Statistical Package for Social Sciences (SPSS) version 21. This was to determine the effect of the dance therapy on the blood pressure (bp) and weight of the respondents by identifying the level of significance and the changes within both groups. Similarly, the SPSS was used in the presentation of frequency graphs to further improve the analysis of the data.

3.12 Ethical Consideration

Ethical consideration forms an important aspect especially in data collection (Trimble & Fisher, 2006). The study therefore paid attention to ethical concerns involving language, informed consent, and confidentiality. The study also obtained ethical clearance from the University of Ghana Ethics Committee in order to guarantee strict adherence to ethical procedures in conducting the study. A copy of the ethics report from the Ethics Committee for the Humanities (ECH) is attached in the appendix for reference purposes. Aside attaining ethical clearance from the University of Ghana Ethics Committee, the study also considered the following ethical procedures.

Informed Consent and Confidentiality

Inform consent is an important issue in research involving human intervention. The researcher's task is to ensure that participants have a complete understanding of the purpose and methods to be used in the study, the risks involved, and the demands placed upon them as a participant (Best & Kahn, 2006). As such, the researcher explained to the respondents the purpose and risk involved in undertaking the study. A hospital authorization letter was obtained from the Abokobi Health centre during the initial stages of the study. This was to allow the researcher unrestrained access to medical history of patients.

As part of the ethical clearance form, there was a consent form which was signed by respondents who have voluntarily agreed to partake in the study. This form was duly read out to the respondents in a language they understood and they were asked to sign accordingly. Further, a video and audio visual form was signed by the patients giving the researcher the authority to use their images at any time for the purpose of the study.

Likewise, the researcher assured the participants that information disclosed were purely for academic purposes hence this information will not be disclosed to any third party.

Language

Language is another ethical issue that was also addressed. The major language spoken by the people from Abokobi are predominantly Ga, Twi and Ewe. The researcher

engaged the services of an interpreter who translated the English language to Ga for the respondents who could not speak English.

Since the study is on health conditions of patients, the researcher provided various mechanisms to cater for ethical consideration. Issues of informed consent and voluntary participation were addressed. Patients' consent forms have already been signed by all those patients willing to participate in this experiment.

3.13 Conclusion

The chapter has discussed the general methods and procedures used in carrying out this study. It has adequately delineated the quantitative and experimental processes used in this research as well as the qualitative case study interviews. The process involved in carrying out the study was quite an interesting experience as hypertension patients were more willing to participate in the dance movements. This was perhaps because of its novelty and their desire to partake in something exploratory and more so because they are familiar with dance. However, there were few challenges encountered; for instance, getting participants to converge at a place for routine dance therapy presented some challenging moments. This was because most of them stayed very far from the meeting place; the researcher therefore had to facilitate transportation arrangements for them. The chapter has also discussed the methods used in this study as well as the actual processes involved. The next chapter presents and discusses the study findings.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter presents the outcome of the experiments and discussions with study participants. The presentation is done in themes to reflect the key study objectives. The study aimed at examining the role of non-pharmacological activities in the management of hypertension among patients; specifically, it sought to employ both experimental and qualitative approaches to assess the impact of dance therapy on the management of hypertension using the Abokobi Health Centre in the GA-East Municipal Assembly of the Greater Accra Region as a case study. As has been mentioned in the previous chapter, the experimental group undertook a dance therapy for a period of time and their blood pressure levels were taken at key intervals whilst the control group went on with their normal pharmacological treatment with their blood pressure levels taken as well. The analysis and discussions are done through a statistical test of the mean blood pressure levels of both groups. This was to assess how the dance therapy impacted the systolic and diastolic blood pressure levels of the experimental group. In the analysis and discussion, the study used some relevant images and figures as well as direct narratives from participants to illustrate the points being made.

4.1 Presentation of Results

The section presents the results from the experimental design and qualitative case study. The experimental design involved 10 hypertension patients with five (5)

involved in an experiment and another five serving as a control group. In all, there were six (6) women and four (4) men. Their ages ranged between 40 and 50 years with two of them in their early sixties.

The qualitative design largely involved seven (7) key personnel selected from the Abokobi Health Centre who comprised two (2) medical officers, two (2) administrators and three (3) nurses. It should be remarked that the patients who went through the experimental process were also interviewed to elicit more information related to their health in the 'pre' and' post dance exercise period. The interview section was facilitated by a semi-structured interview guide. Data from this source was used to triangulate with that of the experimental design.

The first objective of the study was to analyse the impact of dance therapy on the management of hypertension amongst patients. To achieve this objective, the study adopted the experimental research design. Five hypertensive patients at the Abokobi Health Centre were tested. The blood pressures for these patients were measured 'before' and 'after' going through a dance therapy within a four-month period. These patients were not given the normal pharmacological treatment but a placebo [alternate vital drug] was given in order to cater for any complication and psychological effect. They were made to go through periodic dance sessions facilitated by the researcher. Their blood pressures were taken at subsequent intervals. There was another group, [control group] which comprised five patients, whose blood pressures were also taken at the initial stage. They were however given the normal pharmacological treatment at regular intervals and their blood pressures taken at similar intervals. The processes

involved in the experiment and the dance movement therapy are presented and discussed in pages 64 to 67.

In all these dance sessions with participants, with the help of a medical officer, the blood pressures of participants were taken before and after the dance sessions. The blood pressures taken before the process are labelled diastolic 1 and systolic 1. Those taken after each dance session are labelled diastolic 2 and systolic 2. At the end of four-month period, the results for both groups were measured and tested using statistical analysis. The paired sample mean test was used to analyse the 'before' and 'after 'measures of the systolic and diastolic blood pressures of both groups. The results are presented below.

Table 4.1: T-test for paired-sample mean systolic pressure for control group

Source: Author's fieldwork, 2017/18

	Systolic 1	*Systolic2*
Mean	130.59	138.82
Variance	280.88	298.53
Observations	20.00	20.00
Pearson Correlation	0.46	
P(T<=t) two-tail	0.07	
t Critical two-tail	2.12	

Table 4.2: T-test for paired-sample mean of diastolic pressure for control group
Source: Author's fieldwork, 2017/18

	Diastolic 1	*Diastolic2*
Mean	70.00	75.29
Variance	37.50	76.47
Observations	20.00	20.00
Hypothesized Mean Difference	0.00	
P(T<=t) two-tail	0.07	
t Critical two-tail	2.12	

From the tables above, as has already been indicated that five people were set as the control group whose blood pressures were taken at four-month period, each patient had four different measurements making the total observations summing up to twenty (20). At the end of four-month period, the means for both systolic and diastolic blood pressures had rather increased from 130.59 to 138.82 and 70 to 75.29 respectively, *albeit*, the change was insignificant (p-value is more than 0.05).

The results for the experimental group which was taken within the same four-month period are also presented in tables 3 and 4 below.

Table 4.3: T-test for paired-sample mean of systolic pressure for test group

Source: Author's fieldwork, 2017/18

	Systolic1	*Systolic2*
Mean	134.12	127.65
Variance	425.74	181.62
Observations	20.00	17.00
Hypothesized Mean Difference	0.00	
P(T<=t) two-tail	0.30	
t Critical two-tail	2.12	

Table 4.4: T-test for paired-sample mean of diastolic pressure for test group

Source: Author's fieldwork, 2017/18

	Diastolic1	*Diastolic2*
Mean	90.59	72.94
Variance	330.88	109.56
Observations	20.00	17.00
P(T<=t) two-tail	0.01	
t Critical two-tail	2.12	

From the tables above, the mean systolic blood pressure for twenty (20) observations fell from 134.12 to 127.65 whilst that of the diastolic fell from 90.59 to 72.94. Although in both means there was a reduction in blood pressures, that of the diastolic reduction was significant (with p-value of 0.01)

4.2 Discussion

This section provides a thorough discussion of the study results and findings; in the course of this analysis, quantitative tests together with narratives from participants are presented. These primary results or empirical findings are discussed by relating them to both classical theoretical and recent empirical experiences from the literature. The discussions in this section are presented in themes to reflect the key study objectives; consequently, they are as follows: effect of dance in the management of hypertension, challenges that may hinder the adoption of dance in hypertension management, measures to enable adoption of dance therapy in hypertension management.

4.2.1 Effect of Dance in the Management of Hypertension

As has already been stated above, two results of two groups [both test and control groups] are presented above. The findings above provide that dance therapy as a non-pharmacological instrument has potential role in the management of hypertension cases among patients. In tables 1 and 2 above, the mean score for the 20 observations point out that pharmacological treatment of hypertension cases mostly does little in the management process. The study [control group] even points out that instead of the treatment reducing the blood pressure levels, it rather increased it although the change was insignificant with a p-value less than 0.05 [see tables 1 and 2]. With the systolic pressure levels, the 'before' mean for the observations was 130.59 but the 'after' mean at the end of the study period had rather increased to 138.82 at a P-value of 0.07. The mean for diastolic pressure measures 'before' was 70.00 but that of the 'after' had increased to 75.29 at a P-value of 0.07.

The two readings [systolic and diastolic] and changes thereof, suggest that pharmacological treatments in most cases do not necessarily reduce pressure levels among hypertension patients. This finding appears to corroborate a proposition by Börjesson, et *al*., (2016) that it is not enough to view pharmacological and non-pharmacological treatments of hypertension as complementary but the dynamics present sufficient justification for a shift towards the latter. The idea is that a pharmacological intervention for managing hypertension appears to be less effective. Apart from the relative potency levels, studies have observed some peculiar challenges that are associated with pharmacological treatment in developing country context such as Ghana, which may further reduce the motivation for patients to effectively go through such process. For instance, such treatment is very costly, the economic challenges of people prevent them from undergoing any effective treatment process (Buabeng et *al.*, 2004).

The challenges associated with the orthodox treatment, the high efficacy rate of dance therapy together with its strengths present a good complement and perhaps alternative that will be more effective in the Ghanaian context.

The results of the experimental group in this study point out that the dance sessions helped in considerably reducing blood pressure levels. With the systolic measure, the mean for the 20 observations in the 'before' dance sessions was 134.12 but the mean for 'after' dance therapy had reduced to 127.65 at a P-value of 0.30. These patients were not given any blood pressure pharmacological medication except a placebo treatment to reduce psychological effect on study results. Therefore, one can point out

that the change in blood pressure levels was a result of dance therapy. With the diastolic pressure levels, the dance therapy reduced blood pressure from 90.59 to 72.94 at a P-value of 0.01. This value indicates that dance therapy has an impact on reducing blood pressure at a significant level. This finding corroborates an observation by Hagberg et al (2000) that about 75% of hypertensive patient experience a decrease in their blood pressure [systolic and diastolic] as a result of dance exercise training by about 11 and 8mm Hg, on the average respectively (see also Magne, Lancellotti, & Piérard, 2010; Awuah et al., 2014). This study provides empirical confirmation to an argument by Wallace, (2003) that a frequency of not less than three exercise sessions weekly as a minimum can engender blood pressure reduction in hypertensive patients; this is because the dance therapy causes the human nervous system to produce minimal level of vasoconstriction hormones which makes a person more susceptible to blood pressure (Makino et al., 2002).

From the discussion above, the researcher could argue that the usage of dance therapy and other regulated bodily movement exercises have a role to play in the management of hypertension cases and the impact could have far reaching positive effect even than the traditional orthodox pharmacological medications. The results from tables 1, 2, 3 and 4 and statistical tests provide empirical support to buttress the assertion that dance therapy has a positive impact in reducing blood pressures. The researcher argues that treatment and management of blood pressures among patients could use supervised bodily movements and dance therapies as a complementary strategy in the treatment processes. This point has been explained by Balgaonkar, (2010) that the rationale is

that dance movement offers numerous physical and emotional benefits to people who engage in it and more importantly because it is one of the best modes of exercising. In the view of Kumar, (2009) the preference of dance over other forms of exercise lies in the fact that most people see dance as a hobby which most individuals are interested in doing. The study argues that if this is used to complement [but not to substitute] the pharmacological treatment processes, patients will receive effective health status in terms of their blood pressure levels.

The clinical and statistical tests above were complemented with other in-depth interviews and focus group discussions with participants who shared the relative strengths of dance therapy in hypertension treatment. See the figures below:

Fig. 4.1 Health Officer in a discussion with patients who shared their experience

Source: Field Data (2017)

Fig 4.2 Researcher in Focus Group Discussions with patients

Source: Field Data (2017)

Fig 4.3: Sample of Participants in a discussion session to share experiences

Source: Field Data (2017)

Participants shared their experiences and also expressed some concerns about the potential challenges that are likely to affect the integration process (see fig 4.3). The interactions with participants could be discussed under the following themes: Culturally friendly, enhances social interactions, cost saving.

Cost Saving

A greater advantage that non-pharmacological treatments, especially dance therapy have over the orthodox is its cost effectiveness. Our interactions with health providers at the facility revealed that the way patients complain of the costs associated with orthodox treatment, dance therapy provides a cost-effective complement to reduce the financial burdens of patients. A less expensive approach will motivate more patients to be rolled on to the program. In an interview, one of the respondents expressed:

> *"Patients mostly complain that the periodic orthodox medication is more expensive and if there is an approach that is efficacious and less expensive, I believe many patients will get on ...my fear is that they may even stop the orthodox medication"*

One of the patients who had been involved in the dance sessions had this to say in an interview:

> *"I felt relieved after the first two sessions, I was very sad when I missed the third session, but I still did it in my own small way in the house... for me this is quite appropriate for us the poor people"*

This dance therapy is therefore a more user-friendly alternative because most people are economically challenged which suggests that they find it more difficult when it comes to the orthodox pharmacological approach. This point has been argued by Buabeng et *al.,* (2004) that pharmacological approach tends not to be working well due to the economic challenges facing many households. Put differently, it is also expensive and very unbearable for hypertensive patients with poor financial background (Dickinson et al., 2006). Therefore, adopting dance therapy into the health system service delivery will be a very potent and attractive especially to the poor.

Enhances Social Interactions

Rolling out dance therapy in the treatment of hypertension will promote a platform for patients to meet and share their experiences. Non- pharmacological treatment has been discussed as more effective approach to treat hypertension, therefore, with such a platform, members can have the advantage of learning from other colleagues and more importantly from the health experts. A social interaction and exchange of thoughts and discussions are very important in reducing hypertension. One of the patients intimated:

> *"a major cause of this hypertension is stress and family problems oo, therefore, a social exercise that brings together many people will in itself help in reducing their stress levels"*

Culturally Friendly

The dance movements and the process feed into the Ghanaian culture of dance and if well promoted, could have a high chance of people buying into it. Dancing is an art

that has been part of the Ghanaian people and if packaged and communicated very well, it could easily become more acceptable and encouraged among patients. As part of the dance movements employed for the study, some traditional dance movements were used. The findings of the study suggest that traditional dance movements employed for in the study had a very good effect in the management of hypertension. Below are three traditional dance movements which were used very often by the dance resource person and their benefits to the participants. The body parts involved in the process are also highlighted below.

Agbadza

Agbadza is one of the famous, most renowned and very popular traditional as well as a recreational dances in Ghana. It is among the many traditional dances of the Ewes in the Southern of Ghana, Togo, Benin, and parts of Southwestern Nigeria. Unlike other traditional dances, agbadza can be performed by any age category form children to very old adults and for both men and women. It entertains people at funerals, weddings and any other get-together or party. Agbadza holds numerous therapeutic importance to the participants. This is against the backdrop that, the dance involves the movement of many parts of the body in a coordinated form. The body parts involved include the upper torso, the lower part of the body. In terms of the upper body, the dance movements include the hands, the chest, the neck, and head among other parts. The lower body movements include the movement of the legs, the thighs, the buttocks, and the waist part among others. Throughout these processes, the therapeutic effects are clear. For hypertensive patients, the movement of these body part with the

background music serve as a catalyst for smooth coordination among the body parts involved. Consequently, this enhances blood flow throughout the body therefore helping in the management of the blood pressure. See 4.4 below illustrating some body movements involved in Agbadza.

Fig 4.4 Excerpt of dance movements in Agbadza

Source: Field Data (2017)

Kundum

Kundum is another important and well revered traditional dance originally performed by the people Ahanta and Nzema in Ghana. Not only is the dance performed during the famous kundum festival but also during social gatherings where both adults and the aged take very active part in dancing. As a traditional dance, various process are observed in order to engage in the dance. In all the processes involved, movement of various body parts in very common. In terms of body movements, the dance starts with a slow movement of the body parts, in which dancers evoke beauty, majesty and

gracefulness with stately postures of tilted bodies. The dance is then followed rigorous body movement sections exhibited through fast and masculine movements of the body parts. Dance ends with vigorous torso-to-torso movements and strutting movements of the body parts to exhibit the abundance of food in the panting year. The act of "plucking" in the fields is dramatized in the Kundum dance. The implication for hypertensive patients through this dance is that it starts with a very slow movement of the body which allow for acclimatization before the rigorous processes are engaged in. Through this dance, smooth flow of blood through the entire body is achieved. This tends to reduce the body's pressure and subsequently reduces the hypertension in these patients. See next page for figures 4.5 and 4.6.

Fig 4.5: Excerpt of dance movements in Kundum dance

Source: Field Data (2017)

Fig 4.6: Excerpt of more movements in Kundum dance Source: Author's fieldwork

Source: Field Data (2017)

Kpatsa

Kpatsa is also an important and a principal traditional entertainment dance predominantly engaged in by the people of Dangme of Ghana. The dance movement technique is very necessary in therapy as it involve lots of body movement techniques. For hypertension patients, the dance is very iconic in managing the ailment as the several body movements allow to easy circulation of blood throughout the body. The dancing processes involves sideways and forward shuffling movements, making use of short, brisk steps with the body slightly bent from start to end. The dance steps move the dancer either diagonally or backwards. With arms bent in front of the body, the right leg steps in concert with the movement of the right arm while the left leg steps at the same time as the left arm; while one foot remains flat on the ground, the heel of the

other foot is lifted off the ground. For hypertensive patients, the Kpatsa dance aided with background music can be self-practiced at a regular interval and also any convenient time. See figure 4.7 below.

Fig. 4.7: Excerpt of dance movements in Kpatsa led by Mr Asare Newman

Source: Field Data (2017)

4.2.2 Challenges in the Adoption of Dance in Hypertension Management

The second objective sought to assess the key challenges that may constrain the adoption of dance therapies in the treatment of hypertension patients in the health centres of Ghana. The researcher's in-depth interviews with key respondents (medical doctors, nurses and administrators) at the health centre revealed some potential obstacles that are likely to constrain the mainstreaming of dance session. These are discussed below:

Resource Persons

Since the use of dance therapy in hypertension management is a specialized field, involving specific bodily movements and exercises, there are few people who are experts in this area. Therefore, even if health facilities would want to incorporate this therapy in their facilities, it will be difficult to get access to a trained trainer.

The argument is that there are insufficient dance instructors to conduct the dance sessions. A hospital administrator at the facility expressed this:

> *Even if we decide to enroll this exercise, I am not sure any of our doctors or nurses here can take patients through the dance sessions, we have to get additional specialists, apart from the extra cost, I don't even know where the search for 'dance medical experts' will begin from.*

Resource Mobilization: Financial and Facilities

More related to the above, incorporating the process into the formal health delivery system would require additional resources including space for dance sessions, musical instruments and others. This will be difficult to obtain within a short time because most health facilities are already plagued with multifarious challenges including space. A key official had this to say:

> *This I think will help the patients but its implementation will cost us, they can't dance in the open, we need to get an enclosed room, and a nearby place to bath or shower after the exercise… the musical instruments and even the sound it will make may disturb other patients; ideally the place should be segregated…*

Difficulties in Running Dance Session Parallel to Pharmacological Prescriptions

Many of the respondents expressed pessimism about incorporating this therapy to run parallel with the pharmacological prescriptions in health centres. Some were of the opinion that the Ghanaian population when get used to a particular practice, changing such pattern will be difficult and perhaps problematic. Combining dance therapy with the orthodox medical practice in treatment of hypertension will be challenging.

One of the health professionals remarked:

> *My reservations are that, when will the person take the prescribed medication and when will the dance also go on? Patients may feel that if they have medicines, why stress themselves again with dance?*

Difficulties in Getting Patients to Participate

There are different people with diverse socio-economic background who suffer from hypertension. Therefore, it will be difficult in getting these patients together to go through any practical dance session. Apart from it being new to them, getting on with diverse socio-economic people to dance may appear weird to most patients. There is a probability that many patients would approach this development with apathy especially those who have become more used to the pharmacological interventions. Again, many people do not want to go through a tedious exercise, mostly the obsessed individuals who are paradoxically the ones with high blood pressure risk factors. A doctor had this to say:

Most of the patients are very old, some are fat and im trying to see how these categories of patients who are the majority will embrace dance. How will they start? Most of these may not be interested and they will hide behind the orthodox medication…

Stigmatization

Apart from the physical difficulty that may prevent a greater number of patients, other social factors may further deepen the apathy levels. People may not want to be known by their medical conditions because they may be stigmatized in society as 'hypertension patients' by people. Some respondents expressed concern that since this will be a new development, any individual may be curious to find out more about 'the dance' in the hospital; the simple response will expose the medical conditions of all participants. One of the patients explained:

My worry is that, if this thing becomes more regular, any other patient who visits the health centre will ask.. eiii where is music coming from?.. then someone will respond, ohh, there is a dance training for hypertension people over there. Therefore, anyone who sees you patronizing that facility will know your medical condition.

4.2.3 Measures to Enable its Incorporation in Hypertension Management.

The final objective was to find out practical strategies to enable the incorporation of dance therapy and regulated sessions at the health centres of Ghana. The discussion with key participants from the study organization revealed that, there are high

prospects of introducing these non-pharmacological treatments in the management of hypertension. However, to enable its prospects, the following strategies are proposed:

Incorporating into Healthcare Policies

The starting point of incorporating dance therapy into the treatment of hypertension starts from the policy level. Policies set the direction and determine how activities should be carried, what is permissible or non-permissible. Management and administrators need to assess how the process could be integrated, clearly delineating the scope. The policy will provide how the dance therapy intervention could appropriately complement the orthodox medication.

Training of Healthcare Professionals

As a new approach to hypertension management, it is appropriate to give refresher training programs to all sections of healthcare officials including *inter alia*, Doctors, nurses, pharmacists on the need and benefits of non-pharmacological practices in the management of hypertension. It is very difficult to support a cause for which you do not believe in it; therefore, it is important for such training to orient people towards the efficacy of dance therapy. One key participant intimated:

> *Even most of our health officers here are not informed of the role of dance in medical process, [management of hypertension], I think we should educate them first on this healing approach so that they themselves will be convinced before they can convince patients too… how can you empower someone if you are not empowered yourself?*

Sensitization and Patient Empowerment

As a more or less a new approach to medical treatment, it is imperative to offer a sensitization process aimed at effectively reorienting the minds of hypertension patients to the efficacy of dance therapy in the management process. It is high time patients obtained adequate information regarding the role of non-pharmacological practices, especially, dance therapy on hypertension management. Mind sets, patterns and attitudes developed over time require a well-structured process to redirect the minds of patients towards a new complement or perhaps alternative. Patients should be educated on its efficacy, its widespread adopting world over and success story of other patients. This information when well packaged and communicated to patients, they will be willing to go through the periodic dance sessions which will tremendously improve their medical conditions. This communication could be done at the national level on major media platforms and at the organizational level; that is, each health centre should have its program of action where hypertension patients are given the strengths, efficacies and major advantages of dance therapy as discussed in the previous section (4.2.2). One of the patients after our dance session had this to say:

> *I think this is a very good exercise, but government or health ministry should make it a point to educate all citizens on the need to go through this dance exercise; it is natural, cheap and very good. Many people do not of this, so if we can communicate to them….*

Budgetary Support and Partnership

As a new approach, there will definitely be some overhead costs to health administrators and the health facility to introduce dance therapy as a treatment tool; it is therefore important for management to demonstrate adequate commitment. Although this is an exploratory study which piloted few patients; it nonetheless has some implications for policy and management decisions. Resources in terms of space, expert trainers, and musical instruments among others will require budgetary commitment and management support cannot be overestimated. Without management and government support, this flagship program can never materialize. It is important to form partnership with private bodies, Non-governmental organizations and international bodies who are interested in this agenda. When the will to do this pops up, there are many interest-based organizations who will be interested in supporting the course, this however requires a proactive role played by management in drafting proposals and searching for right partners. The role of the media in this partnership process is very important. Government should also take steps to consider rolling out the program onto the national health insurance scheme that will make it more attractive. What is advantageous is that, the cost is less costly but the outcome more efficacious, so there is a need to put out interventions that will motivate more patients to express interest.

Involvement of Opinion Leaders

As a new medical intervention, many people may demonstrate some kind of reservation and perhaps derogatory remarks about it. It is important therefore to

involve opinion leaders to sell the message out. For instance, at the community level, the local chiefs, assembly members, religious leaders among others should first be targeted and taught on the need and benefits; then they should be tasked to carry out the message across to their constituents. Patients will be more willing to go through the therapy if they realise their leaders are also involved or part of the communication process. A nurse at the facility explained:

> *In some communities, people have specific people they take information from, for instance, their pastors, chiefs or Imams, if the information does not come from these people, community members will demonstrate resistance, so we can start from these opinion leaders.*

4.3 Conclusion

This chapter has illustrated the processes and procedures used in the entire project the functions obtained from the study. The research has found empirical evidence through both quantitative and qualitative approaches to underscore the relevance of dance therapy in hypertension management. The findings obtained from the experimental research design tend to suggest that the non-pharmacological treatment (dance therapy) appears more efficacious than the traditional pharmacological treatment process. The chapter has also discussed other qualitative evidence to explain the benefits of dance therapy. The chapter has presented and discussed adequately with the help of pictorial images to give quick visual impressions to readers. It has also identified and discussed movements from Ghanaian traditional dances that were used in the research.

All of these discussions in this chapter provide an in-depth understanding of why Ghanaian traditional movements are very useful in dance therapy.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.0 Introduction

The final chapter of the study provides a summary of study findings. It reflects on the research findings to draw conclusions and to suggest relevant recommendations which will serve as a useful resource in incorporating dance therapy in the management of hypertension in healthcare system. The chapter also discusses the field experiences gathered by the researcher in the course of the study.

5.1 Summary

The study aimed at assessing the role of non-pharmacological activities in the management of hypertension among patients, using the Abokobi Health Centre in the GA-East Municipal Assembly of the Greater Accra Region as a case study. In more specific terms, it aimed at assessing the impact of dance therapy on the management of hypertension and the prospects of integrating it into the healthcare system. The study was guided by three key objectives which were: to find out the effect of dance in the management of hypertension; to identify the potential challenges in the adoption of dance therapy in the management of hypertension; strategies to enhance the integration process. The study adopted "the mixed method" approach using the case of Abokobi Health Centre. This section provides a summary of key research findings which are presented in themes based on the study objectives.

5.1.1 Effect of Dance in the Management of Hypertension

The first objective was to measure the impact of dance therapy on the blood pressure levels of hypertension patients. Experimental design was carried out and the outcomes were tested using the paired sample t-test. The results of the experiment indicated that a paradox whereby the control group, which was given pharmacological treatment, experienced an increase in blood pressure [albeit insignificant], our experimental group which went through the dance therapy experienced reduced blood pressure levels with at least a significant level. This non-pharmacological approach has prospects because of the additional advantageous effects it has. Aside the high efficacy levels, it is also culturally friendly, enhances social interaction and cost saving.

5.1.2 Potential Challenges in the Adoption of Dance Therapy

The experimental design provided evidence of the efficacy of dance therapy in managing blood pressure levels. The next objective was to identify the potential challenges that may hinder the incorporation of this treatment process into the healthcare delivery system. Through in-depth interviews with key health officials, the key challenges identified include: trained resource persons, resources mobilization [both financial and facilities], difficulties in running dance session parallel to pharmacological prescriptions, difficulties in getting patients to participate and stigmatization.

5.1.3 Enhancing the Integration

The final objective was assessed; the best strategies to mitigate the potential constraints and to devise strategies to enhance the adoption and integration of dance therapy in hypertension treatment. The key phases in the integration process require: incorporating into healthcare policies, training of healthcare professionals, sensitization and patient empowerment, budgetary support, partnership and the involvement of opinion leaders.

5.2 Recommendations

From the study findings and conclusions drawn above, the study makes the following recommendations.

Firstly, there is a need to incorporate dance therapy in the treatment of hypertension into the policy document of health facilities. This requires an agenda setting where administrators, the Ministry of Health and other stakeholders set agenda or initiates a discussion on the need and efficacy levels. These will enable a policy direction towards its adoption and structuring it well in the health facilities. When incorporated into the hospital's policy, it will direct how activities should be carried, what is permissible or non-permissible. The policy will provide how the dance therapy intervention could appropriately complement the orthodox medication.

Secondly, there is the need to train healthcare professionals on the effectiveness, origin, and success stories of this new approach to hypertension management. It also involves giving refresher training programs to all sections of healthcare officials including *inter alia*, doctors, nurses, pharmacists on the needs and benefits of non-

pharmacological practices in the management of hypertension. The Ghana Health Service should therefore liaise with the School of Performing Arts of the University of Ghana, so that lecturers who are well versed in dance movement therapy (experts) would be able to train the stakeholders involved in the various health centres and hospitals that may want to adopt dance therapy as a non-pharmacological treatment process.

Additionally, it is imperative to offer a sensitization process aimed at effectively reorienting the minds of hypertensive patients to the advantages of dance therapy in the hypertension management process. Mind sets, patterns and attitudes developed over time require a well-structured process to redirect the minds of patients towards a new complement or perhaps alternative.

Moreover, there is the need for top management support because of the initial overhead costs it will pose to the health facility. Without adequate commitment, resources in terms of space, expert dance therapist, musical instruments among others may easily put management off. There should therefore be adequate commitment to make budgetary allocation and zeal to forge partnership with other stakeholders to come on board. Management or hospital administrators could forge alliance with interest-based organizations, international organizations and the media to garner budgetary support for this worthy course. A practical approach is also to sign a pact with the School of Performing Arts (SPA) so that students (dance experts) could be placed at their facilities on attachment and internship programmes. Graduates from

SPA could also do their National Service with health facilities to augment the effort of permanent dance therapy staff.

Finally, in order to get patients to patronize this therapy when it comes on board, the study recommends for the involvement of opinion leaders to sell the message out in a well packaged manner. For instance, at the community level, the local chiefs, assembly members, religious leaders among others, should first be targeted and taught on the need and benefits. This will make the message (the use of dance therapy in hypertension treatment) go down well with the people or public.

5.3 Field Experience

The researcher encountered numerous field challenges throughout the data collection procedure. Dance session for the study for lasted more than three (3) months starting from 5th November 2015 to 29th February 2016. Subsequently, open forum was organized at the Abokobi health centre to sensitize the community on the effect of dance movement on hypertension management.

On 5th November, 2016, five hypertensive patients consisting of three females and two males forming the test group were invited to the dance hall of the School of performing Arts to have the experience of traditional and contemporary dance movement technique.

Mr. Asare Newman the resource person whose dance movement technique was adopted for the study as my module informed all participants about the dynamics of the dance movement techniques. For instance, he trained all participants to carefully

imitate whatever he demonstrated. He further assured them that all they have to do is to carefully follow suit but at their own pace and convenience and that the essence was to make them have a touch of interesting exercise through Dance.

Doctors and a nurses were also available to help with accurate Bp readings and check their weight. From observations, the first one month was not easy at all for the clients, as hard as they tried, they were lost with most of the movement and moreover they said they were then getting used to the environment. However, in December, it was realised that participants had gotten used to the dance hall and the dynamics of the techniques.

It was observed from the Bp readings that because the first to third week movements were not too vigorous, their Bp's which were checked before and after dance sessions showed that there was an improvement. However, the fourth week dances were quite vigorous and from my observations, I noticed they were high due to the readings that were recorded. This is against the backdrop that as much as Dance has an impact as a non-pharmacological tool in managing hypertension, not all dance movements are suitable for hypertensive patients.

If I ever have the opportunity to embark on this research again, the first thing I will do is to source for adequate resources which can make for large sample size involving more patients for both my test and control group. This can make for generalizations and robust conclusions.

Furthermore, I will engage the services of stakeholders from the School of Performing Arts so that instead of going one way in terms of the dance style used, many styles will be employed so that a variety of best suit dance for hypertensive patients may be made available for their own selection. Also, due to the limitations that were uncounted, more participants who were interested could not have participated in the study. Should I be given the opportunity again for further study, I will engage more people instead of the ten (10) participants which will hopefully further enhance the results for analysis in terms of the comparative aspect of my work. Nonetheless, participants were much disciplined as they revealed high sense of commitment and time consciousness which may be as results of the fact that they were few and one could easily be identified if they were absent. From their experiences shared, hard work and determination to overcome is key in any situation you find yourself in. Experiences from the study indicate that participants have strong preference for non-pharmacological option as they easily resort to any non-pharmacological interventions they hear about from anybody.

5.4 Conclusion

From the findings of the study, the following conclusions are drawn. Firstly, from the experiment and value of our statistical test, the researcher concludes that dance therapy has an impact on reducing blood pressure at a significant level and even more efficacious when complemented with orthodox pharmacological treatment process. The conclusion adds to the body of existing literature on the concept that about 75% of hypertensive patients experience a decrease in their blood pressure [systolic and

diastolic] as a result of dance exercise training by about 11 and 8mm Hg, on the average respectively (see Hagberg et *al.*, 2000; Magne et *al*, 2010; Awuah et *al.*, 2014).

Secondly, the researcher concluded that dance therapy approach is not only effective for managing hypertension but has other socio-economic dimensions that could be exploited to enhance its adoption. It could effectively be used to complement (but not to substitute) the pharmacological treatment processes. But in the long term, patients themselves could decide to decide in consultation with their doctor to move for a non-pharmacological treatment if they desire.

Thirdly, this study also concluded that although dance therapy has high prospects of managing blood pressure levels among hypertension patients, there are undercurrents that need to be handled effectively so that the benefits of the therapy could be well projected against the potential challenges. Ensuring effective adoption requires appropriate management of the social aspects [including sensitization, engagement of different stakeholders and opinion leaders] associated with integration.

Finally, the researcher concluded that there are practical steps that are required to mitigate any potential challenge that may potentially obstruct the adoption of dance therapy in hypertension treatment.

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APPENDIX I

Semi-structure interview guide for Health officials

This semi-structured interview guide is designed to collect opinions on dance in the management of hypertension by using selected patients in Abokobi health center as a case study.
This research is in partial fulfillment of a Master of Philosophy degree in Theatre Arts at University of Ghana.
Being a purely academic exercise, the research is not intended to probe the people's private lives, neither is it intended to collect any information for government or any of its agencies. It is an independent academic research designed and executed by the researcher.
Any information provided shall be treated with strict confidentiality. Thanks for your cooperation.

A. Background Information of Respondent

1. Institution of Respondent……...
2. Designation of Respondent…….

1. The role of dance in the management of hypertension.

3. In your view how do you understand dance?

4. Do you think dance contributes towards managing hypertension in any way? YES/NO

Explain……
……
……

5. How does dance contributes towards the management of hypertension in the following dimensions?

Economic……

Socio-cultural……
Health and fitness……..

6. What are the significance of dance in the management of hypertension?

Explain……
……
……

2. Using dance to manage obvious risk factors such as over-weight in hypertensive patients.

7. Have your ever advised that hypertensive patients use dance exercise to manage their ailment? YES/NO

Why……
……
……?

8. How many dance sessions per week will you recommend for them?
……
……

9. How effective were these dance sessions in reducing high blood pressure in patients?

Very effective ( ) Effective ( ) Not Sure ( ) No effective ( )

10. If you have ever monitored the medical history of hypertensive patients using dance as a non-pharmacological tool in managing hypertension, Please provide the **Blood Pressure (BP)** before and after each session in the table below.

Month 1							
WK1		WK2		WK1		WK2	
Before	After	Before	After	Before	After	Before	After
Month 2							
WK1		WK2		WK1		WK2	
Before	After	Before	After	Before	After	Before	After

Month 3							
WK1		WK2		WK1		WK2	
Before	After	Before	After	Before	After	Before	After
Month 4							
WK1		WK2		WK1		WK2	
Before	After	Before	After	Before	After	Before	After

11. How can dance be used to reduce obvious risk factors in hypertensive patients in these dimensions?

Over-weight

……
……

Physical inactivity

……
……

High Stress levels

……
……

Excessive Alcohol

……
……

Dietary intake

……
……

3. The challenges associated with dance in the management of hypertension.

12. What are some of the constraints associated with the use of dance in the management of hypertension?

FInancial……
……
……
……

Unwillingness of patients to participate

……
……
……

Proximity to the dance hall

……
……
……

Unavailability of dance instructors

……
……
……
……

4. Recommendations

13. Why will you recommend dance as a non-pharmacological intervention for hypertensive patients.

Economical

……
……
……

Easy to practice

……
……
……

Enhances social interactions

……
.....
.....

Patient-based management intervention/therapy

……
……
……

Thank You

Interview guide for hypertensive patients

1. What is your understanding about dance as a tool for managing hypertension?
2. From you experience as a participant, do you think dance can help in managing hypertension?

   Probe: How can dance reduce your over-weight level?

   How can dance help to reduce your stress?

   How can dance enable you to overcome sedentary lifestyle?
3. How does your body and mind feel after each dance class?
4. How does the consequences of the dance class impact on your quality of life on a daily basis?
5. Specifically, what do you think makes this dance session work for your good?
6. After the dance class do you feel any mobility differences?

   Probe: Were you able to walk for a longer time without being tired after the dance class?
7. How entertained were you during the dance class?

   Probe: Were the dance movements very exciting for you?

   How did the dance class help you to interact with other participants?
8. Did you notice any changes in your blood pressure before and after each weeks dance class?

   Probe: Were there a reduction or increased blood pressure (BP)?

Were you excited to see notice that level in your blood pressure?

9. Personally, have you been practicing the dance movement techniques in your home?

   Probe: Do you do it alone or with your family members?

10. Will you be repeating the dance techniques personally after the study period?

11. What were the constraints faced in the period of using dance as a non-pharmacological intervention?

12. Will you recommend dance to any hypertensive patient for its therapeutic purposes?

    Probe: How economical is dance movement therapy for hypertensive patients?

THANK YOU

APPENDIX II

VISUAL/ AUDIO IMAGE RELEASE FORM

I grant permission to the University of Ghana, School of Performing Arts, Department of Theatre Arts and the Researcher involved, capturing my visual/audio images for use in the study. Visual /audio images are any type of recording including but not limited to photographs, digital images, drawings, rendering, voices, sounds, video recordings, audio clips or accompanying written descriptions.

The School of Performing Arts and the Researcher involved will not materially alter the original images and I agree that they own the images and all rights related to them and the images can be used in any manner without notifying me such as poster and theatre slides, presentations and publications as well as for non- university uses.

I am at least eighteen (18) years of age and competent to sign this release. I have read this release before signing, I understand its contents, meaning and impact, I freely accept the terms.

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Name of Client Date

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Signature
Telephone or email address

Institution: *University of Ghana, Legon*
Researcher*: Dinah Mawutor Agbayizah****.***
Supervisors: *Dr. Sylvanus Kwashie Kuwor/ Rev. Dr. Elias Asiama*
Resource Person: *Mr. Asare Newman*
Photographer/ Videographer: *Isaac Adamtey Dua*
Contact Information(email, telephone)*agbayizahd@gmail.com*

PATIENTS CONSENT FORM

Institution: University of Ghana, Legon
Principal Investigator: Agbayizah Mawutor Dinah
Supervisors: Dr. Sylvanus Kwashie Kuwor/ Rev. Dr. Elias Asiama
Contact Information (email, telephone): agbayizahd@gmail.com/0544-254-779

Title of Study: Dance in the Management of hypertension: A case study of Abokobi Health Centre, Ga East Municipal Assembly.

This form provides you with information so you can understand the possible risks and benefits of participating in this study; so that you can decide whether or not you want to be a part of this research study. Before deciding whether to participate in this study, you should read the information provided in this document and ask questions regarding this study. Once the study has been explained and you have had all your questions answered to your satisfaction, you will be asked to sign this form if you wish to participate. You are being asked to take part in this study because you are receiving treatment for hypertension.

Be remembered that your participation is completely voluntary. There is no penalty if you decide not to take part in this study or decide later that you want to stop participating in this research study. Your care at Abokobi Health center will not be affected if you decide not to participate. Upon your consent to enroll in the dance session, you will be asked to participate in voluntary dance movement therapy sessions with the investigator and a facilitator two times per week. Each session ranges from 45 minutes to 1 hour, depending on your comfort level. Movement therapy is a body-based form of therapy intended to integrate the mind, body, and spirit. It involves gentle stretching, relaxation techniques, body awareness, and/or meditation with the help of background music. There is no pre-determined plan for this dance movement therapy sessions.

You will be in the study from the moment you give informed consent by signing this form until you complete the final survey just before discharge. If for some reason the investigator does not receive your completed surveys, then the investigator will simply not use your data in the final research. The results of this study may help medical professionals to determine whether it would be good to provide Dance movement therapy services to patients with hypertension. Records of participation in this research study will be maintained and kept confidential as required by law.

SIGNATURE BY THE CLIENT

…… …… ……

Name of Client Signature Date

HOSPITAL AUTHORIZATION FORM

Institution: University of Ghana, Legon

Principal Investigator: Agbayizah Mawutor Dinah

Supervisors: *Dr. Sylvanus Kwashie Kuwor/ Rev. Dr Elias Asiama*

Contact Information (email, telephone): agbayizahd@gmail.com

Title of Study: Dance in the Management of hypertension: A case study of Abokobi Health Centre, Ga East Municipal Assembly.

This study is intended to uncover the role of dance in the management of hypertension and further assess how dance can be used to reduce obvious risk factors such as over-weight in hypertensive patients. As part of this study, the researcher intends to collect information from the medical records of participating patients. These participants will largely be hypertensive patients in the Abokobi Health Centre. For the researcher to attain the objectives of the study, the blood pressure (BP) and other medical history of the patients will be needed. However, these classified medical records cannot be assessed without prior approval from the necessary authorities. Therefore I write to seek for the consent of your outfit to release these information to facilitate the study. Medical history collated from the hospital will be under strict protection and confidentiality. The nature of the study also requires that some hypertensive patients be taken through weekly dance sessions. I also seek the authorization of the hospital management in order to engage ten hypertensive patients from this facility.

Authorizing Signature.

…… …… ……

Name	Position	Date