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Neurological Disorders, Bone Setters and Pain: Clinical Observation and the Appraisal of Its Treatments in Two Modern Hospitals and Various Non-Medical Settings in Ghana

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ABSTRACT

Background and Aims: *Major neurological disorders and orthopedic problems that patients suffer in Ghana are numerous. The study discusses their various treatment centers in the hospital sector and in the local domain, as well as their traditional medical practitioners. The non-medical treatment centers in the Eastern Region of Ghana have been visited, and their dynamic contributions to patients' pain treatment, both acute and chronic, have been accounted for.*

Method: *This study investigates neurological disorders, bone setters, and pain treatment by using clinical interviews and naturalistic observation. This six-month research illuminates the appraisal of its treatments in two modern hospitals in the Begoro Fanteakwa District and some non-medical settings in Ghana.*

Results: *The results show that both biomedical practitioners (PBD) and non-medical practitioners (KTP) collaborate, intentionally or unintentionally, to provide effective treatments for neurological disorders and pain. This collaboration benefits patients who often receive care from both sectors. Indigenous medical practitioners' efficacy about pain treatment depends on their experience, methods, and cultural beliefs shared with the patients. Cultural myths reinforce certain treatment approaches. The study finds that, despite differences in treatment practices, both medical and non-medical centers play important roles in Ghana's healthcare landscape.*

Conclusion: *The study finds that hospitals often resort to amputation when treating severe pain from accidents or injuries, while traditional practitioners generally aim to avoid amputation. This creates a clear distinction between hospital and traditional treatment approaches for pain. Patients tend to seek traditional practitioners first, turning to hospitals only when other options are unavailable. The presence of both sectors enables patients to compare and choose where they perceive the best chance of recovery and quality of life.*

Keywords

Neurological disorders; Chronic Pain; Acute Pain; Coping strategies; Drugs; Herbs; Bone Setters; Traditional Practitioners; Bio-medically trained Professionals.

Introduction

Knowledge of neurological disorders such as ataxia, epilepsy and etc., [1-8] and its treatment of pain associated with them in Ghana came late like all countries in the Sub Sahara Africa, so a greater number of patients suffered these kinds of illnesses in secret, having been branded evil illnesses. It was surmised that these disorders were spiritually caused illnesses, so medical doctors could not do much about them; as a result, patients' initial help came from those traditional practitioners who were bold and prepared to deal with them.

Presently, neurological disorders are treated by both knowledgeable traditional practitioners (KTP) and professional biomedical doctors (PBD) who are trained as psychiatrists, neurologists, surgeons, neuroscientists, physiologists, physiotherapists, nurses, etc. Therefore, the gathering of these professionals, including diverse pain therapists, is doing all they can to aid patients in dealing with their illnesses and pain management in both urban and modern big cities with regional hospitals and university teaching hospitals [9-11].

In Ghana, research that was conducted among 7950 patients who sought consultation with hospitals over the period noted that as many as 7076 had a primary neurological disorder [12-14]. The frequencies of the major neurological disorders were epilepsy (23.0%), peripheral neuropathies (19.6%), movement disorders (14.7%), cerebrovascular diseases (11.1%), and headache disorders (7.7%). Neurocognitive disorders, autoimmune demyelinating disorders of the nervous system, and motor neuron disorders were infrequently observed, according to these studies. This investigation by Akpalu et al. discusses the prevalence of neurological disorders in Ghanaian society and the need for the government to commit its resources and personnel to them.

Aims of the Study

The purpose of this study is to investigate neurological disorders, bone setters, and Pain treatment with them using clinical interviews and naturalistic observation. The research will illuminate the appraisal of its treatments in the Begoro Fanteakwa District Hospital and some non-medical settings in Ghana.

Major neurological disorders that patients suffer in Ghana are numerous. The study shall discuss their various treatment centers in the hospital sector and in the local domain, as well as their traditional medical practitioners. The non-medical treatment centers in the Eastern Region of Ghana have been visited, and their dynamic contributions to patients' pain treatment, both acute and chronic, have been accounted for. Ayim-Aboagye has, since 2015 and most recently in 2025, studied and published works in these areas. An attempt to give reasons why traditional treatment centers have become popular with most patients who seek quick treatments for their disorders, even in the present advanced technological era, has been the focus.

Research Questions

1. What knowledge do the non-medical practitioners (KTP) have at present that conforms to or differs from modern scientific understanding of the causes of neurological disorders?
2. Does the non-medical practitioners' (KTP) knowledge pose a risk to pain treatments of neurological disorder patients?
3. Does any collaboration exist between the biomedical practitioners (PBD) and non-medical practitioners (KTP) in the manner pain treatments are performed?
4. As non-medical practitioners (KTP), where do their pain treatment efficacies stem from in their healthcare handling and treatment of neurological disorder patients?

Methodological Considerations

Begoro Fanteakwa South District Hospital

This modern hospital has good facilities and possesses doctors, nurses, and other professionals on the team. It has a good location and serves the needs of patients from Kwahu South and the Afram plains area, which includes Asesewa town. The hospital is also utilized by patients from neighboring towns, such as Oseim, Busoso, Agyeikrom, and Hiamekyene. There is a good transport system and other important infrastructures like electricity, which make life worth living. The Orthopedic Section is very effective, and it is patronized by these towns and districts.

Begoro Salvation Army Modern Clinic

This modern Clinic has operated for many years since its inception in the early 1930s. It possesses modern, well-educated personnel and well-equipped facilities. There has been a tradition that goes back into many years that shows that Dutch Doctors from Holland have been collaborating with this famous clinic. The Orthopedic Section helps many accident victims, who are involved with chainsaw lumbers, motorists, cyclelists, and inexperienced drivers in the region. They treat sores, broken bones, or fractures. There is a strong collaboration between the Orthopedic Section of this hospital and the Government Hospital at Koforidua. The former prepares for serious victims who need to go through amputation in the latter. Pregnant women, male and female patients, and children are warded.

The Social Welfare Unit is popular with patients from diverse cultures of the community, which includes Krobo, Ewes, Kwahu, Akyems, Kyerepon, migrants, etc. The welfare center deals with patients such as Ataxia patients, Epilepsy patients, crippled patients, amputated hands and legs patients, who are mostly supported by the Dutch Government in the Netherlands.

Traditional Practitioners Involved as Bone Setters and Pain Treatment Experts in the Centers

Two Krobo men, aged 67 and 57 years, operated in the center of the Begoro District. They are experienced in the profession, having worked with bones and fractures for many years after their apprenticeships. They live with their families and their apprentices. One had earlier lived in the Miaso area, in Begoro. Now a Municipal district, Begoro attracts both visitors, migrants, and workers in the region. Market women who come to do business on Fridays find time to visit these centers concerning their dire conditions. They have strong contacts with doctors who do most treatments and usually refer patients to these practitioners. Thus, there seems to be collaboration going on between these men (KTP) and the modern biomedical doctors (PBD) in the district. They recount having treated many patients, both old and young, women and men, and students. They visit patients in their homes in all the districts, especially those patients who cannot move or walk due to their condition. Practitioners do not entreat gods or work with spiritual mediums but depend on their knowhow and experiences to deliver. Their parents have taught them this business, and they use ingredients such as roots from certain trees, specific herbs, pepper, osorowisa, hwentea, etc. to work. Some do not employ portion.

Naturalistic Observation of Pain Treatments

Data collection was gathered using the naturalistic observation and clinical interviews. Six months were spent gathering information (September 2025-December 2025). Earlier visits were brief and had to be the visits to patients who suffered from bones and knees. There were home interviews, as some nurses were not usually on duty, so they could be asked to contribute.

The approach of not using their precious time to answer questions outside the hospital or clinic was fruitful. This permitted long chats and interviews, which could depend on their free time to obtain information from these professionals. It was easy to meet the patients who had Ataxia, Epilepsy, and crippled and fractured bones due to the use of special aids or wheels. Some had accidents with motorcycles, and they had been amputated. Often, the plaster used to protect their fractures or sores gives a clue about these patients, and that gives the opportunity to initiate conversation with informed consent.

Pharmacological Treatments with Drugs and Herbs

The hospital and clinic often use pharmacological treatment and drugs (intervention with drugs) to help their patients, while traditional practitioners use mostly tree barks, roots of certain trees, herbs, and traditional methods to heal fractures and wounds. This sharp and clear demarcation can be observed with patients who have consulted the former, and they were elicited from interviews and conversation with professionals of either camp during treatments.

Neurology and Pain Patients and Their Conditions

The Social Welfare Unit treats patients who suffer from ataxia, epilepsy, cerebral palsy, and tricyclic patients. Doctors and nurses have ample time to help these patients deal with their conditions. They are provided with careful support, which means constant care is needed to control and exhaust all the support of the unit. Personnel includes physiotherapists, physiologists, naprapatists, acupuncturists, doctors, neurologists, neuroscientists, psychiatrists, psychiatric nurses, etc.

Sample and Instrument

The study used a convenience sample of nurses and patients who had undergone treatments in both hospitals and nonmedical treatment centers. Naturalistic observation and clinical interviews were conducted among these nurses and patients, who were numerous, but the sample was restricted due to the qualitative techniques that were employed to reach the goal of the research. On the whole, 5 nurses and doctors and 11 patients were studied, making a total of 16 participants. Among the patients, 6 females and 5 males were employed. The mean age of participants was 64.6 years (65 years).

Acute and Chronic Pain

No questionnaire was developed for this qualitative research, except for the informed consent, which was gained prior discussion before the interviews commenced. Acute pain was defined as pain experienced only occasionally, most of the time an individual was free. Chronic pain was regarded as pain experienced almost every day or recurring pain for three of the past 6 months. Demographic studies included age, gender, marital status, ethnicity, and the primary practice site, number of years of active practice, current employment status, disability status, and health status.

Results

Empirical Data from Two Modern Hospitals and Various Non-Medical Settings

What knowledge do the non-medical practitioners (KTP) have at present that conforms to or differs from modern scientific understanding of the causes of neurological disorders? The results show that while certain conditions originate from ataxia disorders, certain medicines or drugs can cause it. That is the general understanding among biomedical specialists (PBD), but so far in Ghana, the results show that genetic conditions are less mentioned or attributed as the cause. Stroke, tumors, multiple sclerosis, degenerative diseases, and alcohol misuse can cause ataxia, which the meaning may be attributed to an evildoer or magic, spiritual forces by some non-medical practitioners. Most often, stressed treatment given to ataxia patients determines the cause of ataxia by these same professionals [15]. If the patients and the family believe in the spiritually caused illness, they will consult a healer or shaman who deals with culturally provided myths and their management systems. On the other hand, if the cause is understood to be biomedical, then there are devices such as walkers and canes that might contribute to support or aid in maintaining independence. These instruments are known as adaptive devices, which are provided free of charge by the Salvation Army Modern Clinic, which collaborates with the Dutch Government through their expert doctors (Holland), and the Begoro Fanteakwa District Hospital, which is supported by the Ghana Government. In addition to this, physical therapy, occupational therapy, speech therapy, and regular exercise are employed to alleviate the pain that is often associated with ataxia and other notable neurological disorders.

Does the non-medical practitioners' (KTP) knowledge pose a risk to pain treatments of neurological disorder patients? The result of the research does not provide a straightforward answer to this, but it is seen in certain communities where the lack of coordination, which is an uncommon outward manifestation of various neurological conditions, may generate conflict among friends, relatives, co-workers, and lovers. These consist of stroke, brain tumor, multiple sclerosis, traumatic brain injury, toxicity, infection (including following varicella), and congenital cerebellar defects [16]. While modern doctors diagnose the disease as being caused by certain factors well-known in the academic world and the medical quarters, these cannot be exempted from being given spiritual connotations as regards the cause of these disorders. The genesis of this illness brings the experience of acute, sub-acute, episodic, or chronic. Progressive ataxias frequently cause diagnostic uncertainty in general neurological practice, and many cases remain undiagnosed (or 'idiopathic').

Patients' Experiences of Acute and Chronic Pain

In this section, a sample of patients who suffered both acute and

chronic conditions is presented in the results. The results show confusion and anxiety about going through pain that may result from accidents, injuries, amputation, and deep fractures.

Patient (HA) was a 50-year-old female and had two children. She suffered from a knee injury, which plagued her with chronic pain. The knee had been X-rayed by doctors and was found not to be holding together properly. She had strong contact with the doctors of Begoro Fanteakwa District Hospital and a traditional practitioner. She had been in the ward inside the hospital for some weeks before the contact was made. She accepted the fact that both consultations are helping her in her treatment of her disability. When the contact was made the last time, she was living in her house and receiving treatment at the same time from the traditional practitioner. She lives with her 18-year-old daughter, who attends Begoro Presec Senior High School. She does some business in selling water and popcorn.

Patient (JA) was a 29-year-old male patient who had a motor motorcycle accident and was in serious trouble, and had acute pain. He was afraid of contacting doctors in Begoro Fanteakwa District Hospital or the Salvation Army Clinic because he feared his legs and hands would be amputated.

His six-month contact and treatment from the traditional practitioner luckily cured his disability. He had successful treatments and an outcome that enabled him to walk again. He returned to his village.

45 years old (AM) who was a married female with two children had acute pain when her leg slipped and fell into a gutter/ditch. She experienced acute pain and could not be silent from her characteristic shout of pain: "Someone should help me, please, please, help me because my heart is breaking…" Her fractured leg was straightened gradually over time. The Practitioner managed to treat the bone, which she thought were damaged without repairs. She did not pay the traditional practitioner who did the bone setting, but this kind of treatment could have been charged by Doctors in Begoro Fanteakwa District Hospital.

This characteristic behavior is not common in the centers of the traditional practitioners since nowadays almost all of them charge patients, though they are not exorbitant fees as we find in the latter treatments.

Patients could be in dire need to see the traditional practitioner, but this may not be possible because of the condition of the patients. This particular patient (PV), a 70-year-old male, had been paralyzed and had no means of transport to carry him to the center. According to one traditional practitioner, he would travel around and meet them one by one, just like this patient. He has patience and studies the situation of each individual and meets him/them to assist in bone treatment. "Except you did not alarm him of the need to receive treatment, or he did not know the condition of the patient." Indicated by this old man, who felt better after continuous treatment for three months by the traditional practitioner in his own village.

An 80-year-old female Patient (AN) died after some weeks of amputation of one leg by the Koforidua Government Hospital. She suffered a sore on her leg, which was not due to diabetes. She spent some months with the Begoro Fanteakwa Hospital and the Salvation Army Clinic, where she had received daily treatments, but it did not help her. She was asked to travel to Koforidua Government Hospital, where an amputation was performed, and she did not survive weeks after the experience of this ordeal.

A male patient who was 72 years old (OA) but had no family, could live 8 years with amputation of the leg. He had a superstition that his younger sister was a witch who was behind his illness. Though doctors tried to treat him, his superstitious mind did not allow his treatment to be continued or taken seriously in Begoro Fanteakwa District Hospital. He turned to faith healers who did not administer proper medicine to treat the wounds. This resulted in his fatality, and he died after suffering from a brief illness that had nothing to do with his amputation.

Three patients, (DA), (NS), (AS), suffered from pain disabilities with legs. All of them had experienced big sores on their legs that meant they experienced chronic pain. While amputation of the affected legs in the Koforidua Government Hospital aided them to cope with their disabilities, they were never psychologically sound in mind. Only (DA) could live up to 98 years and died peacefully. Interviews with relatives about this patient, who was a female and had many children and grandchildren, revealed that she had a personality type that is phlegmatic and susceptible to coping strategies. This enables her to cope and reflect on her ordeal as she works with her sewing profession alone in the house. Her belief system as a charismatic believer/convert also helped her to take life easy and cope. Few patients could reach the age of this patient, who died not long ago in her own house, surrounded by her immediate family and some close friends.

Finally, (NL), who was a 52-year-old male patient with children, had suffered from sores all over his two legs that were not diabetic. His acute pain was drastically reduced when doctors prescribed Dicloxacillin Antibiotic drugs to be taken for the treatment of the sore. This is one of the strongest antibiotic drugs. Moreover, Triple Action Crème, which contains anti-fungal, Anti-biotic, and anti-viral medication, was applied to his sores. There was a quick improvement that enabled him to return to the city and continue his job as an automobile furnishing specialist. (NL) considers his successful treatment due to his consultation with Begoro Fanteakwa District Hospital and his meeting with his personal doctor, who suggested the prescription of these strong antibiotic drugs to him.

Outcomes

The outcomes of pain management in these treatment centers and hospitals are the collaboration that exists between the biomedical practitioners (PBD) and non-medical practitioners (KTP) in the way treatments are performed. Each is seen to contribute to treatment efficacy and, collaboration, even though not always intentional, in most cases, is favorable to the patients who enjoy the help of each

practitioner. With regards to non-medical practitioners, treatment efficacies depend on their healthcare handling methods, that is attached to certain belief concepts that are understood by the patient and the practitioner. The same culturally provided myths aid the treatment of neurological disorders. Understood from this point, then the variability between these treatment efficacies in the centers does not matter, as both are contributing greatly in the context of Ghana's healthcare.

Discussion

To the present researcher's knowledge, this study has furnished the important information of how pain treatment and bone setting with patients in the Begoro Districts and other various environments are being collaborated by traditional practitioners and bio-medically trained doctors, unknowingly or knowingly. The doctors and other professionals that consist of physiotherapists, orthopedics, neurologists, neuroscientists, psychiatrists, nurses, and others all play their roles in the management of pain disabilities that are chronic or acute. Based on this finding, they use pharmacological drugs and physical treatments that consist of bandages and plasters to help patients deal with their pain. Traditional practitioners mainly apply local herbs, roots of certain trees, bark of certain trees, and other traditional methods that are adapted to their environments to treat and work as bone setters. They complement the treatments that help patients avoid amputation, which most people are scared of and do not want to go through. The anxiety and psychological distress involved in having to allow amputation causes some people to die, thinking that the alternative is much better than living with one hand/leg or being handicapped.

There is no need to look for support for the differences that exist between the doctors' treatments and the traditional practitioners because they all work to help patients who are caught between the middle of either using any methods given to them by the hospital or the traditional practitioners that could help them cope or survive death. Studies that have been conducted earlier in urban areas, as well as rural areas, have shown that participants prefer to work with traditional practitioners who promise them no form of amputations and still receive non-pharmacological or pharmacological interventions.

There is some support for previous studies that found that women cope better with amputations than men; however, that was not part of my findings here, as two of the women who were amputated died soon after their ordeal. Probably due to fear and the fact that they would not be able to move freely in their societies as before.

Limitations

The greatest limitation of this study was the small sample size resulting from the use of a convenience sample to gather participants. Consequently, the study cannot be generalized because of its qualitative approach in gathering samples for the interview and the naturalistic observation. The second limitation is that the study involved a non-representative segment of the population; children and young adults were not identified in the interview and the observation, though these groups are known to be the majority seeking help from pain disabilities in the hospitals. Another limitation is the inability to employ quantitative data, a method of data collection that could help avoid being biased and relying on memory, which observation and naturalistic data promote. This may make the study problematic.

Concluding Remarks

Findings from this study indicate that the hospital's treatment of pain due to accidents or injuries is not able to avoid amputation, while the traditional practitioners are able to avoid it. This shows sharp differences between the treatments of pain inside hospital sectors and the traditional treatment centers. Patients who want to avoid these should try not to approach the former unless there is no other way to deal with their pain and its associated illnesses or disabilities. All the same, collaborations between these two health sectors enable patients to test both sectors and choose which offers them the perfect chances of survival and a promising new life.

Implications for Research in Pain and Neurological Disorders Management

In earlier research reported that among the majority of patients who sought consultation in hospitals over the period, they had noted that a much higher percentage had a primary neurological disorder [17-20]. These disorders are associated with their associated pain management, which could be acute or chronic. This has been the work of the main hospitals in Ghana, where patients also seek help with fractures and orthopedic problems that result from accidents and minor injuries. Traditional practitioners had been saddled with similar problems due to the fact that the main hospitals conduct amputations when sores and conditions cannot be sustained to help treatment, but they, on the other hand, promise amputation-free or seldom recommend them. They allow the patients to keep their fractured bones and sores on their legs or hands while treatment is performed.

The findings of this investigation reveal knowable or unknowable collaborations that go on among the District's hospitals professionals who operate in the regions and traditional practitioners who work with patients who consult them for their expertise on bone setting and pain management. Success differences existing between them are not accounted as indicating the preference of the patients concerning the hospitals as against the traditional practitioners, but that patients use the other alongside while receiving attention and medication from the other. Due to the small sample used in this investigation, it was not possible to explore how gender differences influence the account for success in management of pain. Also, which of the gender groups survives well after amputation or damage to part of the body? Future research should employ a larger sample to explore this knowledge and the outcomes among younger groups who also consult mainstream hospitals more than traditional practitioners, which the older groups prefer and patronize.

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Conflict of Interest
The authors declare no conflict of interest.

Informed Consent Statement/Ethics Approval
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Declaration of Generative AI and AI-assisted Technologies
This study has not used any generative AI tools or technologies in the preparation of this manuscript.

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