



## The Impact of Community Based Rehabilitation (CBR) on Education of Persons with Disabilities in Plateau State

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**Abstract.** This study assessed the impact of Community Based Rehabilitation (CBR) on education of persons with disabilities (PWDs) in Plateau State, Nigeria. This study is hinged on Kirkpatrick (1959) evaluation model with descriptive statistics used as a method a method of evaluation. The data collected from the main study revealed that persons with disabilities who are receiving intervention in the CBR programme are not the same. Results indicated that five categories of persons with disabilities are receiving intervention in the CBR programme in Plateau State. They are those with hearing impairment, visual impairment, intellectual and physical disabilities as well as those with leprosy. Rehabilitation efforts are being provided in Plateau State where the main study took place. Result also showed that the CBR programme influenced access to education for persons with disabilities in the study areas. It was shown that the CBR programme produced free and compulsory access to basic education, improved enrolment, and influenced special transitory and educational services for persons with disabilities in the study areas. It is, therefore, recommended that authorities should ensure that the impact of education must be felt on the part of persons with disabilities. However, this can only be appreciated when there is periodic evaluation of the programme to ascertain that its objectives are achieved. There is need for a change in community attitude and CBR programmes so that persons with disabilities will have increased access to some public buildings, which in turn, will help increased social integration of persons with disabilities, the findings of the study equally attest to this fact. More importantly, there shall be a diversified and appropriate curriculum.

**Keywords:** Community Based Rehabilitation (CBR), Education, Persons with Disabilities (PWDs), Plateau State

### 1. Introduction

Community Based Rehabilitation (CBR) is a strategy within community development for the equalization of opportunity, social integrity and rehabilitation of persons with disabilities. Rehabilitation can be described as the restoration of an individual suffering from an abnormality to normality or near normality. It is a process which enables persons with disabilities to reach and maintain their optimal physical, sensory, intellectual, psychological and social performance. Rehabilitation gives persons with disabilities the tools they need to reach their independence. Federal Republic of Nigeria (2010) defines rehabilitation as all measures aimed at reducing the impact of disabilities for an individual, so that the person can achieve a better-quality life and self-integration. Rehabilitation includes not only the training of persons with disabilities but also the intervention of the general system of society, adaptation of the environment, the protection of human rights and empowerment of persons with disabilities within the society.

Ozaji (2005) submits that rehabilitation is an activity to assist persons with disabilities to shift from the position of dependence to independence, inadequacy to adequacy, psychological wreck to self-confidence and happy contributing members of the society. The author also noted that Community Based Rehabilitation (CBR) is a process that is managed by the instrument of the community for revitalizing the capacities of persons with disabilities, for meaningful

and independent living in the society. It stands out as a rescue mission for the purpose of restoration, conservation and advancement of individuals and the incapacitation of disabilities.

Persons with disabilities are those who, because of circumstances of birth or life have physical, intellectual, social, sensory, or psychological impairment that makes it difficult for them to live a normal life. Obani (2006) posits that persons with disabilities are those who are socially, psychologically or culturally disadvantaged. These include those who have hearing, visual, mental and physical (mobility) difficulties. Others are those with serious behavioural, emotional and attention disorders, including those with epilepsy, leprosy and street urchins that negatively affect their school life and learning. This group of individuals deserves good quality of life in the areas of health, education, livelihood, social development and empowerment as outlined in the CBR matrix

World Health Organisation, International Labour Organisation, International Disability and Development Consortium and the United Nations Economic, Social and Cultural Organisation UNESCO (2010) states that CBR programme is geared towards persons with disabilities, their families and the community in which they live. The programme optimizes the person's functional ability and independence. CBR is implemented in Nigeria as a project and mostly initiated by international non-governmental disability organizations. Before the formal launching of the CBR guidelines in 2010 in Nigeria, there already existed CBR projects implemented in parts of Benue, Abuja, Bauchi, Ebonyi, Kaduna and Plateau States.

Quality of life connotes the standard of health, comfort, and happiness experienced by persons with disabilities. It is the general well-being of individuals and societies including physical health, family, education, employment, wealth, religious belief, finance and the school environment. WHO, ILO, IDDC, UNESCO (2010) outlined in the CBR guidelines and its matrix, the components of CBR which includes; health, education, livelihood, social development and empowerment.

The education component hinges on access to quality education for persons with disabilities at all levels. This includes primary education, secondary and higher education, non-formal education and life-long learning. CBR presupposes adequate education. In this component, inclusive education at all levels is recommended to enable persons with disabilities to have access to learning and resources that meet their needs and respect their rights. Special education, to

some extent, is also applicable according to contextual realities and needs. The education component also enables education structures, systems and methodologies to meet the educational needs of all children, including providing participatory, accessible and inclusive monitoring and assessment structures in an institution.

Evaluation is a process by which general judgment about quality, goal attainment, programme effectiveness, impact and costs can be determined. Theodoulou and Kofinis (2004) assert that the consequences of policy programme are determined by describing their impacts, or by looking at whether they have succeeded or failed according to set established standards in line with the CBR matrix. Evaluation is a review of the whole project. In order to assess its overall value and effects, it is carried out before or after a project is implemented. This study is therefore evaluating the impact of the CBR programme after the project has been implemented. This in fact is the situation of the CBR programme in Plateau State. Programme evaluation is a systematic method of collecting, analyzing and using information to answer questions about projects, policies, and programmes, particularly about their effectiveness and efficiency. It is a process that critically examines a programme, activities, characteristics and outcome; its purpose is to make judgment about a programme, to improve its effectiveness and or to inform programming decision.

Though not properly documented, there is a growing skepticism about the impact of the CBR programme on the quality of life of persons with disabilities, as such persons and their organizations continue to question their active participation in the programme management circle. Conielje, Conielje, Ayuba, Ayuba, Ibrahim and Ngala, (2015) opined that in spite of many initiatives worldwide and in spite of renewed interest in CBR the real situation is that the majority of persons with disabilities do not have any access to any form of rehabilitation. However, professionals conclude that CBR remains the most potent means of rehabilitation of persons with disabilities and tend to portray it as the most acceptable standards of rehabilitation.

In Nigeria, even where those CBR programmes are implemented, quality of the programme is often of great concern. Conielje, et'al (2015) report that even in those countries like Uganda, Malawi, Kenya, Peru, Bangladesh, India etc where National CBR programmes are claimed to exist, coverage is often limited and quality impaired, the author added that while coverage may be limited, there is also quite

some evidence probably not in the scientific literature but certainly among those who work on the ground - that the notion of quality is a point of concern too.

Plateau State has been implementing the institutional rehabilitation strategy to disability inclusion with the establishment of the Government rehabilitation centre in Jos and the Blind craft centre at Zawan. With the growing inability of these facilities to provide any meaningful services, the introduction of the CBR programme by the Christofell Blinden Mission at the COCIN Hospital and Rehabilitation Centre Mangu was considered a novel approach, providing essential services to persons with disabilities in their communities.

Education is a potent tool for both national and individual growth. Unfortunately, many persons with disabilities lack access to education. Those few who are enrolled in the school system and training programme lack unique instrument for their learning needs such as equipment, materials and facilities that meet their educational demands. persons with disabilities, sometimes, have impairment condition(s) such as injury, wounds, malformation, physical deformities and sicknesses, unfortunately access to affordable health facility and care is challenging. Many persons with disabilities who have ill-health conditions either do not have access to the health facility or have no resources to take care of their health needs. This situation aggravates their health status and affects their quality of life.

In the School system, some students or teachers still feel pity instead of empathy about the condition of persons with disabilities than empowering the persons with disabilities to learn the desired skills for fear that they may get hurt or injured. There is a negative attitude and low expectations about the ability of persons with disabilities to carry out responsibilities.

In Plateau State, some hospitals and rehabilitation centres provide some rehabilitation services. Although these centres claim to have made some improvement on the quality of life of persons with disabilities, there is no reliable statistical evidence to such claim. Conielje, Velema, and Finkenflujel (2008) report that while many claims are being made about the quality, appropriateness, effectiveness and efficiency of CBR programme, little scientific evidence exists to substantiate the facts. There is therefore the need for better evaluation of the programme to ascertain the actualization of goals and impacts on the quality of life of persons with disabilities. It is against the aforementioned that the

CBR programme in Plateau State which includes: education, health, livelihood, empowerment and social components merits evaluation.

The aim of this study is to evaluate the impact of Community Based Rehabilitation programme for persons with disabilities in Plateau State, Nigeria. Specifically, the objectives of the study are to find out the category and numbers of persons with disabilities receiving intervention in the study area and ascertain the impact of CBR programme on access to education for persons with disabilities in Plateau State.

It is against this background that the researcher intends to carry out summative evaluation of Community Based Rehabilitation programme to ascertain its impact on persons with disabilities in Plateau State, Nigeria. The study provides answers to questions: (1) What are the categories and numbers of persons with disabilities receiving intervention in the CBR programme? and (2) In what way does the CBR programme impact or not, access to education for persons with disabilities in Plateau State?

Following this introduction, section two provides a literature review on the topic, that is, previous works on or related to the topic. Section three provides the methodology of the study, while section four presents the results and discussion. Section five provides the conclusion with policy recommendations.

## **2. Literature Review**

### **2.1 Conceptual Framework**

#### **2.1.1 Concept of Community Based Rehabilitation (CBR)**

The Community Based Rehabilitation (CBR) is a strategy developed to assist persons with disabilities to live a normal or near normal life within their communities using the community's local resources. This term has historical antecedents as discussed below. Community Based Rehabilitation is derived from important words, the "community" and "rehabilitation". In order to give a better understanding of the nature of CBR, it is quite significant to appreciate the two key words "community" and "rehabilitation". WHO (1981) defines community as consisting of people living together in some form of social organization and cohesion. Its members share in varying degrees, political, economic, social and cultural characteristics, as well as interest and aspirations including health. Community varies in size and socio-economic profile, ranging from clusters of

isolated homesteads to more organize village, towns and city district.

On the other hand, rehabilitation is the restoration of an individual particularly those with disabilities to absolute normality. This may be in terms of education, health, livelihood, social development and empowerment. CBR focuses on the effective application of the available resources in the community as a way of cutting cost, while retaining world class value and services for the rehabilitation of persons with disabilities who are the recipients of these services. It is more or less a strategy aimed at making development activities, especially in the community, to be more inclusive while promoting equal opportunities and integrating people with disabilities within the community for better and sustainable rehabilitation.

According to WHO, ILO, UNESCO, IDDC (2010) in a joint position paper defines CBR as a strategy within general community development for the rehabilitation, equalization of opportunities and social integration of all people with disabilities. CBR is implemented through the combined efforts of disabled people themselves, their families and the communities, and the appropriate health, education, vocational and social services. The above definition of CBR is pragmatic and instructive, it views CBR as a strategy within community development, this gives more light on the operation of any CBR programme which is an approach targeting the adaptation of community activities to be more inclusive of persons with disabilities. It is measured on how much disabilities perspectives are included in community development, equalization of opportunities and social interpretation of all people with disabilities provided the basis through community development can be inclusive of all persons with disabilities. Tom and Nicholas (2002) assert that CBR focuses on the ability rather than the disability, CBR is a reflection of the social model of disability. This notion entails that it is the society that deserve to be rehabilitated rather than the Person with impairment. By act of omission or commission, the society creates a lot of barriers either attitudinal or physical which impose activity limitation on the impaired. The removal of this barriers will provide succour and liberate the impaired from activity limitation.

Ozaji (2005) observes that in order to understand the concept and operation of CBR, it is important to consider the view points of the United Nations' Agencies (ILO, UNESCO & WHO). These are provided below:

- CBR represents an effort to entrust members of the family and the community with the task to perform rehabilitation functions. In this, rehabilitation process is simplified in a way that illiterate community members are able to carry out their rehabilitative exercises, produce and use simple aids and services.
- CBR is an extension service based on the objectives, to a large number; of persons with disabilities in the rural areas and referring people in need more sophisticated services to rehabilitation centres and other specialize centres.
- CBR refers to the use of simplified methods of rehabilitation and the promotion of awareness and responsibility for rehabilitation in the family and the whole community.
- CBR is a strategy for improving service delivery, for proving more equitable opportunities and for promoting and protecting human rights of persons with disabilities.

CBR, from these viewpoints, is conceived as a strategy within the community development for the rehabilitation, equalization of opportunities, and social integration of all persons with disabilities. The author summarizes CBR as a rehabilitation process that is managed by the instruments of the community for realizing the capacities of persons with disabilities in the society. It is operated on the principles that this rehabilitation will involve aids and techniques for training persons with disabilities in simple skills within available community resources (Ozaji, 2005).

### 2.1.2 Empowerment

The principle of empowerment connotes enabling persons with disabilities to join, mainstream and to participate more fully in society. This involves risk taking with others who will share in victories as well as in disappointment. Velema and Cornielje (2010) state that persons with disabilities seek empowerment by learning more and more to claim what is rightfully their own. In particular, they learn to ask for the realization of what by law has been accorded to them and to advocate new legislation where the rights of persons with disabilities are not secured. This also implies that gross violation of the rights of persons with disabilities is made known and perpetrators brought to justice. Empowerment aims at giving persons with disabilities the confidence to ask for and make full use of opportunities to be included.

The authors report that in many countries, persons with disabilities work together in self-help groups and disabled people's organizations. They work together to obtain bank loans or medical services. The success of one person is an incentive for another

to follow the example. Empowerment is to show persons with disabilities that they can make choices for themselves and flow in autonomy. All people go through stages of development in life. people learn to work, play, relate to peers, become independent of their parents, marry and have children; become older, play a role in the society, etc. Similarly, persons with disabilities develop and grow though with some limitations which an abled-bodied person will not experience.

In a related development, Bodang and Lalu (2015) note that empowerment is about helping persons with disabilities to become people in the full sense of the word, with equal opportunities, rights and responsibilities living a life that is fulfilling and satisfying and contributing towards happiness, quality of life and community development. For this to happen, persons with disabilities need information about what is possible, about services they can use and about rights they can claim. It may be saved to assert here that, among all the principles of CBR, three stands out. These are: inclusion, empowerment and sustainability which account for 90 percent of the information in the CBR guidelines. Many other principles may be validly added, but these will only marginally increase one's understanding of what the guidelines are about (Velema & Cornielje, 2010).

### **2.1.3 Concept of Persons with Disabilities (PLWDs)**

Persons with disabilities are those individuals who have one forms of cognitive, sensory, physical or psychological challenge or the other that impede their normal functioning and who are equally expected to live and learn within the locality. Obani (2001) describes persons with disabilities as those who are socially disabled. These include those who have serious behavioural, emotional and attention disorders that negatively affect their quality of life and learning. They include those who are socially stigmatized such as ex-convicts, former leprosy patients, former child prostitutes, street urchins and those with obvious physical sensory or mental disabilities. They include the following: Persons with hearing impairment, persons with visual impairment, persons with physical and health impairments, persons with leprosy, and persons with intellectual disabilities

### **2.2 Theoretical Framework**

This study is hinged on Kirkpatrick (1959) evaluation model. This model helps evaluators to analyze the effectiveness and impact of a training programme for

better improvement in the future. The model has four distinctive principles popularly referred to as levels of training evaluation, namely: Reaction, Learning, Behaviour, and Results. Reaction deals with how the trainees react to the training programme. It relates to the topic, materials, presentation and environment. The learning level helps the trainer to understand how the training is received by the audience. It emphasizes increase in knowledge as a result of the training based on the objectives. This is important because knowing what the trainees are learning and what they aren't will help to improve future training. At the behaviour level, the trainer evaluates how far trainees have changed. It looks at how trainees apply information learned from a given programme. At the result level, the evaluator analyzes the final results of training or programme. This includes outcome that has been determined to be good for the trainees.

This model can be applied to this study because the four levels are all relevant to this study. This is because the reaction, learning, behaviour and results levels are all used in the evaluation of CBR programme. There is the need to ascertain the reaction of persons with disabilities toward the CBR programme. Again, the educational opportunity and learning condition of persons with disabilities are important in evaluation processes. It is equally necessary to ascertain the extent to which the trainees put their learning to use and the outcome of training received through the CBR programme. The researcher deems it necessary to apply the four levels of training evaluation models in this study.

### **2.3 Empirical Studies**

Studies related to the relevance of Community-Based Rehabilitation programme for persons with disabilities have been documented. Similarly, evaluation studies and its impact have also been carried out by some researchers. Articles on the general objectives of the programmes have also been reviewed. Below are some of the articles reviewed:

Cornielje, Conielje, Ayuba, Ayuba, Ibrahim, and Ujah (2015) evaluated 10 CBR programmes supported by Christian Blinden Mission (CBM) in Nigeria. The purpose of the study is to assess the strengths and weakness of the CBR projects in relation to implementation, management and effects in order to provide strategic direction for multi-year planning. Specifically, the study aims at assessing the outcome of the projects on the beneficiaries, project performance in terms of quality role of stakeholders, collaboration with other services, sustainability in

terms of impact and finances, as well as informed future planning for CBR interventions.

The study adopts evaluation design with a population involving persons with disabilities, careers, parents and families of persons with disabilities. Interviews and personal observations are tools for data collections. This data is largely debriefed, analysed and findings appropriately reported.

Findings show both areas of strength and weakness, for instance, it is reported that the areas of strength of the programme lies in a well-developed health domain with professional staff and quality services, good quality education, strong partners which create positive impact in the lives of persons with disabilities. On the other hand, the areas of weaknesses include the small little grasps of CBR, it focuses mainly in rural areas and field work has currently stopped. The authors make references to Plateau State, University of Jos and Disabilities Rights Commission as having the chance to develop and evaluate CBR programme in Plateau State.

Though the researchers point out the areas of strengths and weaknesses of the 10 CBR programmes evaluated, the structure of the evaluation procedure does not follow the component of empirical review. Some important components are left out. For instance, there is a mention of the use of research questions but none is stated. Similarly, there is no hypotheses, sampling and the methods of data analysis. This makes it difficult for future researchers to discern meaning from the possible data collected.

Similarly, Mannan and Turnbull (2007) reviewed a Community Based Rehabilitation evaluation with focus on quality of life as an outcome measure for future programme evaluations. The purpose of the study is to examine relevant literature and research concerning evaluation of CBR. The design is a case study with the use of a questionnaire and interviews with standardized, open-ended questions.

Findings reveal that CBR is highly effective and valuable for persons with disabilities in the community; CBR makes it easier to integrate persons with disabilities through education programmes, CBR trains generic community workers in delivery of rehabilitation and prevention services to persons with disabilities and their families. Further findings equally show that the CBR programme failed to teach activities of daily living skills to persons with disabilities in a successful manner.

Just like the previous review of evaluation study, this review equally leaves out some important components of empirical review. The researchers mention the use of both qualitative design but are not specific on the type of design employed. Again, there is no specific mention on the number of reviews made or a number of samples used in the evaluation. This makes it difficult to discern the outcome of the study more so that the research questions/hypotheses are not clearly stated. This current study shall endeavour to align with the current research procedures.

Furthermore, Bodang and Lalu (2016) investigated the role of traditional rulers in CBR programme in Plateau State. The purpose of the study is to identify the general roles of traditional rulers in supporting the CBR programme in Plateau state, their perception of persons with disabilities in their areas. Literatures related to CBR as well as the roles of traditional rulers in supporting CBR programme are reviewed. The study adopts the survey research design with a population comprising of traditional rulers, CBR field workers, parents of persons with disabilities, disabled people's organizations. A sample of 35 subjects participated in the study. They are selected through simple random sampling techniques. The study utilized the focus group discussion techniques to collect the needed data.

Findings show that there is a very low understanding of disabilities by the traditional rulers. However, majority of them are willing and interested in facilitating access for persons with disabilities in community development activities. The above study though directly linked to CBR evaluation, failed to state the research question or hypotheses that should guide the study. Similarly, the method of data analysis was not stated. These make it difficult for the reader or researcher to conclude whether the responses are statistically significant or not. However, this present study shall indicate and use plausible statistical package for data analysis.

Consequently, Raj and Pitchai (2015) conducted a study on the development of a new quality of life questionnaire for children with hearing loss, the impact of hearing loss on children, field testing and psychometric evaluation. The purpose of the study is to report the development of user-defined, multi-dimensional, psychometrically sound quality of life questionnaires impact of hearing loss on children in two languages: Tamil and English. The study adopts the qualitative analysis. A 103-item self-administered questionnaire with 6 domains (educational implication, social integration, psycho-social

wellbeing, speech, language and communication, family relationships, and general functioning) constitutes the psychometric properties of the instrument. The 103-item questionnaire is translated from Tamil to English and self-administered by children with hearing loss (11-18 years) in special schools (n=100) and integrated schools (n=100) as well as by normal control in integrated schools (n=200). Standard methods are used for item reduction and evaluate psychometric properties.

After analysis using chi-square statistics, results indicate that all the six domains of both the questionnaires have good acceptability, high-internal consistency ( $\alpha > 0.80$ ; instructive validity 70.80) and test-retest reliability (0.86). The questionnaires significantly distinguish between the children with hearing loss and normal control. The domain of both the questionnaires shows moderate evidence of convergent validity, and discriminant validity derived through hypotheses testing show mixed results. The authors assert that the impact of hearing loss on children are valid-user-defined, multidimensional questionnaire are available for the time in both Tamil and English language.

Similarly, Vermeer, Conielje, Post and Idah (2015) conducted a study on the role of traditional leaders (sarakuna) in developing successful CBR programme. The purpose of the study is to examine the role of traditional leaders in developing CBR programme and the outcome that the 'Sarakuna' set regarding the improvement of the quality of life of persons with disabilities. The study is guided by four research questions. The study adopts the observational cum descriptive design using qualitative method. The population comprised of representatives of the traditional leaders, Disabled People's Organizations (DPOs), Government officials, NGOs and staff of special schools. These are contacted through convenience sampling; interview was largely used as instrument for data collection and focused group discussion was adopted for data collection. The interviews are conducted in Hausa language, two are recorded and fully transcribed in English and categorized according to the analysis framework.

Results indicate that not much literature is available on the role of traditional leadership in rehabilitation programmes and social welfare. Nevertheless, the traditional leadership is still present in contemporary Northern Nigeria. Some 'Sarakuna' improve the socio-economic position of persons with disabilities by functioning as mediators and by their ability to provide social insurance. NGOs are helped to access

the community of persons with disabilities. They lack necessary skills and training to promote inclusion and rehabilitation of persons with disabilities. The authors suggest that Community Based Rehabilitation programmes should pay more attention to social contexts and work on specific context of traditional leadership. The researchers are able to present the purpose, design, population and procedures for data collection and findings. However, there is no mention or statement about the research questions, sample and method of statistical analysis used. The current study intends to fill these missing gaps.

Similarly, Badu, Opoku, Appiah and Agyei-Akoyere (2015) survey the financial access to health care among persons with disabilities in the Kumasi Metropolis, Ghana. The study adopts a cross-sectoral survey design with quantitative data collection method. A total of 255 persons with disabilities, physically impaired, hearing and visually impaired constitute the sample for the study. Multi-stage sampling techniques are used to randomly select five out of ten clusters of communities based on the definition of sub-metro. A simple random sampling is equally adopted to select participants from the communities.

A structured questionnaire is administered to the respondents. The questionnaire is developed in English but administered in the respondent's preferred dialect – English, sign language or Asante Twi. A professional interpreter assists in the study. Results of the analysis are generated using descriptive and analytical statistics comprising of simple percentage, mean, standard deviation and p-values. The findings reveal that there are more male than female participants, nearly one-third of them has no formal education and 28.6 are unemployed. The average monthly expenditure in healthcare is GHC21.56 (USD 6.0) which constitutes 9.8% of the respondents' income. Factors such as age, gender, disabilities type, education, employment and whether or not they stayed with family members have significant bearing on the average monthly expenses on healthcare ( $p < 0.05$ ).

Similarly, transportation cost, the travel distance to facilities and the regular sources of payment for healthcare, have significant relationship with access to healthcare ( $p < 0.05$ ). The authors assert that financial access to healthcare remains a major challenge for persons with disabilities. Measures to finance all healthcare expenses of persons with disabilities are urgently needed to improve their access to healthcare. The researchers are however unable to state neither research questions nor

hypotheses, yet they assumed to have analyzed, interpreted and provided results in tabular form. This means that the study is not guided by any research question or hypotheses. In the present study, the researcher will draw-up research questions and hypotheses that will guide the study.

Furthermore, a study on inclusive society in Cameroon: understanding the perceptions of students in University of Yaounde II about persons with disabilities is undertaken by Opoku, Badu and Moitui (2015). The purpose of the study is to examine the perceptions of the students in the University of Yaounde II about persons with disabilities in Cameroon. A cross-sectoral study design using quantitative methods is employed with a sample of students at the University. A questionnaire is used to gather information from 500 students selected by simple random sampling. The data analysis involved descriptive and inferential statistics.

Results show that among the participants, 57.8% were males, 89.2% are single and the average age is 24.9 years. Findings further revealed that 69.8% did not know about the actual population of persons with disabilities in Cameroon, though 14.6% have relatives with disabilities. None of the students perceived disabilities as a contagious condition and 79.8% agreed that education has influenced their perceptions about persons with disabilities. Gender and education level have significant relationship with changes in perception (OR = 1.8,  $p=0.01$  and OR = 1.91,  $p=0.04$ ). However, 13.5% are unwilling to work with a person with disability in the future.

The authors conclude that issues of disabilities have not been taken into consideration in Cameroon. Therefore, there is need for education towards disability. In addition, policy makers should include persons with disabilities into national strategic plans, in order to ensure an inclusive society. Despite the robust efforts the researchers put in this study, some of the scientific procedures are not reported. For instance, there is no research question; hypotheses and the instrument with its corresponding validation are not reported. These tend to affect findings since the authenticity of the instrument is not reported.

Similarly, Bowers, Kuipers and Dorsett (2015) analysed a 10-year literature review on the impact of Community Based Rehabilitation using data base source. The review is set out to find and assess the available evidence by looking at the attributable impact of CBR on quality of life for persons with disabilities. A thematic literature review on the impact of CBR in low to middle income countries is

conducted. The review covered the period from 2002 to 2012 and the CBR matrix is utilized to provide structure for the evidence. Seven studies that investigated the impact of CBR interventions in developing countries are included. A modified harvest plot is used to summarize the strength and nature of evidence provided in relation to the CBR matrix. Both qualitative and quantitative designs are employed. Quantitative studies tend to focus on the health domain, while qualitative studies generally focus on the social and empowerment domain. Frequency tables and bar chart are used to illustrate the outcome of the reviews.

Findings reveal that there is zero evidence of CBR impact found in the education domain, while very little evidence is found pertaining to livelihood for persons with disabilities. Overall, the evidence based related to the impact of CBR remains limited, both in terms of quality and robustness of design.

This study attempts a review of CBR programme on the lives of persons with disabilities especially following the CBR matrix. Unfortunately, the survey nature of the design did not give the reader opportunity of ascertaining the veracity of the findings. Neither research questions nor hypotheses are stated. There is no room for any instrument since the study is reviewed through internet database. Similarly, no evidence of statistical analysis is stated apart from representation of possible findings in tabular form. Findings are more of deductive than objective reasoning. Even though the CBR matrix is clearly figured out, there is no statistical certainty that the findings are a reflection of responses from the stakeholders. It is the desire of the present researcher that these gaps will be addressed in the current study which has similar characteristics.

Furthermore, Nguon (2015) investigated the impact of education on the lives of young persons with disabilities after university graduation in Cambodia. The purpose of the study is to explore the possible impact of education on young persons with disabilities access to higher education in order to increase their employment prospects, impact on their families and immediate communities. Three research questions are raised to guide the study. First cohort of graduates from the University of Cambodia participated in the study. The study consists of 15 graduates who received scholarships from the university scheme programme. Interview technique made up of both verbal and written consent as well as tape recorder, and transcription are used for data collection and analysis.

The study finds that, education has a very positive, empowering impact on the lives of the graduates due to changes in their lives self-perceptions and perceptions by family members, neighbours and colleagues. However, their educational accomplishments have less impact within the broader community, as some participants continue to experience discrimination when seeking employment. The writer concludes that although education seems to positively impact the young persons with disabilities in this sample, within the broader community there is discrimination in employment.

This study is apt. However, just like the writer admits the small sample size in this study which is non-representative of the population of persons with disabilities in the study areas could possibly limit generalization of findings to the entire population of persons with disabilities in Cambodia.

Bozimo (1991) carried out an evaluation study of integrated social studies programme for junior secondary school students in Plateau State. The purpose of the study is to examine and ensure integrated social studies programme in junior secondary school curriculum among others. Research questions are posed and literatures related to the study are reviewed. The study adopts an evaluation design. The population involves trainers, teachers and 3,500 students of social studies from 70 secondary schools in the former Plateau State made up of Plateau and Plateau States. Binomial distribution statistics is used for testing technique and the sample percentage is used to analyse data collected.

Findings reveal that social studies programme in terms of content, materials, objectives, process are adequate in the attainment of national objective. The study also reveals the need to incorporate citizenship education in the curriculum. Based on that, the author recommends that proper re-orientation of the nature and structure of social studies should form bases for pre-service training as well as in-service retraining of social studies teachers. The author concludes that there is a need for periodic evaluation of social studies programme for efficiency.

Similarly, Grischow, Mfoafo-Mcarthy, Vermagden and Commaert (2018) conducted a review on physical disability, rights and stigma in Ghana: A review of literature. The purpose of the study was to peer-review articles focused on cause and consequences of stigma towards persons with physical disability in Ghanaian articles which discusses stigma and human rights. Methodology includes systematic search of the on-line data bases

EBSCOhost, ProQuest, PubMed and web of science for peer-reviewed articles on disability in Ghana. 26 articles were chosen for critical review. Under analysis, the contents of the article were grouped under two sections: major themes (human rights, causes of stigma) and policy recommendations (economic, medical service healthcare, affirmative action, attitudes and awareness raising and inclusion of cultural beliefs).

Result indicated that most of the studies attributes stigma to negative attitudes towards Ghanaians with disability, and many highlight beliefs among Ghanaians that disability is cause by spiritual and supernatural forces. The consequences, according to most authors are social, economic and political exclusion. Policy recommendations included improving government policy, increasing funding for disability programmes, changing public attitudes, and paying attention to Ghanaian culture and tradition in designing disability interventions. While these are valid points, the authors pointed that the literatures also suffer from lack of a deep understanding of the historical and socio-cultural roots of super natural beliefs in Ghana.

The author therefore, concluded that the 26 studies discussed in these reviews showed that since 2006 very good work has been produced on disability in Ghana, especially by Ghanaian's disability scholars. It was therefore hypothesized that a full understanding of disability and stigma in Ghana must be based on deeper research into the roots of the beliefs that drive stigma. More research into the economic cause and consequences of disability is also recommended, without which a full analysis of cultural stigma will not be possible. A major gap in this review is the fact that, though findings were reported, there was no empirical data showing statistics of responses arising from collation of articles from the data base. This tends to present the results as mere theoretical assumptions of issues reported in the internet, this current study will endeavour to fill the gap in literature.

Furthermore, Govindasamy, Dhondge, Dutta and Mendis (2019) reported in a study of access to social organization, utilization of civic facilities and participation in empowerment groups by people with disabilities in Maharashtra, India. The purpose of the study was to assess the baseline level of access to social institution, utilization of civil facilities and participation in empowerment schemes by people with disabilities in the study area. The study utilized the survey technique where 60 villages from two blocks in Amrawati district were selected for the

study. From those villages 522 households were sampled 3056 individuals were surveyed. Interviews were conducted with 590 individuals with disability from among the surveyed population. The structure interview schedule consisted of demographic data, access to social organizations, utilization of civic services, and participation in empowerment schemes. Simple percentage was used to analyse the data.

Result show that locomotive disability was the most prevalent in the study area. Disabilities were present among young adolescents and young adults than among the older population and females. Over 50% of the study participants had no occupation (including children and students) and had not been to school. Only 48% had achieved secondary education and more. Access to social institutions was less than 50% for most of the items, and was even lower among females. Except for the nation card and Aadhar card, civil service was generally under-utilized by persons with disability. Only 3.2% of the participants were members of self-help groups, and not a single person was a member of the disabled people organization (DPO).

This study is plausible with laudable findings. However, though the study was a survey, the design was not reported and the sampling technique was equally not reported. Interviews were conducted but how the opinions were translated into percentage scores as reported was silent. The study also did not report whether it was guided by research questions or basic assumptions. These observations shall be noted to fill the gap in literature so reviewed.

Tosac and Lazaru (2021) contributed a systematic review on the effectiveness of Community-Based interventions in improving activities of daily living and quality of life outcomes in persons living with stroke in Italy, United Kingdom, South Korea, Canada and Australia. The purpose of the study was to compare the effectiveness of community-based interventions with the usual or hospital-based treatment in improving Activities of Daily Living (ADL) and quality of life (QoL) outcomes in people with strokes these criteria were involved in the review, there were mention of community-based rehabilitation systematic review involving people with stroke and including ADL or instrumental activities of daily living (IADL). Literatures related to Community-Based Rehabilitation and daily living skills of stroke survivors were extensively reviewed.

The study reviewed 10 experimental studies from high income countries (Italy, United Kingdom, South Korea, Canada and Australia) involving 1,575

participants with 806 males, 656 females and 113 unclassified participants in the study. The articles reviewed measured ADL performance and QoL. Published, science direct, cumulative index to nursing and Allied Health and Scopus data bases were used as search sites. The preferred reporting items for systematic reviews and meta-analysis were used. Result indicated that community-based intervention (CBI) generally demonstrates improvements on ADL and QoL values similar to usual or hospital-based care. There was wide variability in the intervention described and the outcome measures used for both groups. Risk of bias assessments revealed issues with randomization, blinding and follow up. Stroke-specific baseline characteristic such as length of time since diagnosis and laterality varies considerably in all the studies. This study though reported for reaching findings, it does not have research questions or hypotheses. This makes it difficult for the reader to discern the direction of findings whether it support or refute the hypotheses. Similarly, there was no specific mention of research design or sampling procedure used in the study as against the current study which indicated the design and sampling techniques used in the study.

Similarly, Chibaya, Chidiaya, Governances and Naidoo (2021) undertook a study from the University of Kwazulu Natal South Africa. The study was a scoping review aimed at mapping the evidence on strategies employed by countries in implementing the United Nations Convention on the Right of persons with Disabilities (UNCRPD) in Africa and the implementation challenges, also to analyse the initial country reports on the implementation of the UNCRPD so as to relate the report to other findings from the literature.

A three-step strategy was employed for search of information. The data base of springerlink and MEDLINE, a list of key words pertinent to the UNCRPD and its implementation in Africa were compiled. The search of key words was limited to the period of 2008-2019 and peer reviewed documents. Literatures related to the topic were reviewed. The study adopted the preferred reporting item for systematic reviews and meta-analysis (PRISMA) extension for scoping reviews. A total of 107 sources were initially retrieved and after a process of screening and exclusion, 31 sources (11 research papers and 20 country reports) were included for inductive analysis.

Results showed that, there was evidence of implementation of UNCRPD in Africa, especially in the area of employment; however, there is unique contextual limitations in implementation of

UNCRPD in Africa. The country report reflected similar implementation issues, thus identified in studies selected for this paper. On the bases of the findings, the researchers suggested that African Governments should broaden focus on implementation of other articles of the UNCRPD, the researchers have however failed to identify the instrument used and statistical technique used for the study. None of the tables report the statistical value that led to discussion making on each of the findings the current study shall indicate both instruments and statistical methods for data analysis in order to fill the gaps observed.

Results on quality, variation and nature of CBR interventions showed that majority were implemented in Africa targeting all people with disabilities and frequently focused on topics of HIV/AIDs. These interventions were most commonly designed to educate people with disabilities on issue of sex(usality), sexual abuse prevention or SRH. The study failed to report the statistical package used for data analysis even though findings were reported they cannot be substantiated statistically, the current study shall address this gab.

Most of the empirical reviews focused on evaluation of CBR programme to determine the areas of strength and weakness. Focus is also on finding out whether the programme meets the objectives and to ascertain the impact of the CBR programme on persons with special needs. As laudable as the findings of these studies are, many of them did not follow the components of empirical research despite the fact the findings are reported. The major gaps in the review centre on the fact that only one study focused on the use of CBR matrix and one of the recommendations is that subsequent researchers are encouraged to evaluate CBR programme base on the indices of its matrix.

Another gap from the literature reveals that, no evaluation study is carried out in the current study areas to the best of the researcher's knowledge. Most of the empirical reviews fail to indicate the research questions, hypotheses and statistical package used for the study. Most of the designs are quantitative in nature without the categorical indications of the types and procedures of data collections. Again, 90% of the empirical reviews are foreign based evaluation studies. This has implications for Nigeria's CBR programme because it is not known whether the CBR programme in Nigeria especially the current study areas are achieving their set aims and objectives and whether the beneficiaries are actually catered for in the study areas.

It is based on these reasons that the researcher intends to evaluate the The impact of Community Based Rehabilitation (CBR) on Education of persons with disabilities in Plateau State of Nigeria.

### **3. Methodology**

This section focused on the method and procedure adopted for the study. This includes the research design, population and sample, sampling techniques, instruments for data collection, validity and reliability of the instruments, procedure for data collection and method of data analysis.

#### **3.1 Research Design**

This study is based on the descriptive survey research design. A Descriptive Survey Research is an approach of Descriptive Research that blends quantitative and qualitative data to provide you with relevant and accurate information. A time-efficient research method, descriptive survey design engages the people who are at the centre of the research objective.

The design focused on Stufflebeam (1974) model of content, input, process and product (CIPP) evaluation. It emphasized the process of delineating, obtaining and providing useful information for judging decisions or information at various stages or types of programme development. The CIPP model enables and guide comprehensive, systematic examination of social, medical and educational project that occur in the dynamic septic condition of the real world.

Thus, the researcher carried out summative evaluation on the impact of Community Based Rehabilitation (CBR) programme for persons with disabilities in their naturally occurring environment based on the components of the CBR matrix (Health, Education, Livelihood, Empowerment and Social). Using this approach has enabled the researcher to explore the perspectives of the participants and their experiences in the context in which they occur. In the context of this study, the independent variable is defined as the evaluation of the CBR programme while the dependent variable is the quality of life of persons with disabilities in Plateau State, Nigeria.

#### **3.2 Population and Sample**

##### **3.2.1 Population**

The population of this study was made up of 1,946 respondents. This was made up of basically, service providers (CBR Supervisor, Field Workers and

Volunteers) and persons with disabilities involved in the CBR programme. This includes one (1) supervisor, five (5) field workers and eighty (80) volunteers, while persons with disabilities were 874 from Mangu, 248 from Bokkos, 571 from Barkin Ladi and 167 from Pankshin Local Government Areas (LGAs) of Plateau State totalling 1,860 PWDs. Specifically, those persons with disabilities studied include the Deaf, the Blind, persons with physical Disability, those with intellectual disabilities and persons affected by leprosy. These Local Government Areas were chosen for the study because the CBR programme had been implemented there and thus was evaluated.

**3.2.2 Sample**

The researcher used the whole 1,946 participants for the study. 1,860 participants received the CBR programme intervention in Mangu, Bokkos, Pankshin

and Barikin Ladi Local Government Areas (LGAs) while 86 personnel were service providers who provide services covering the five components of the CBR matrix at different communities within the scope of this study. The adoption of the total population was necessary in order to give each participant the opportunity to partake in the study. Similarly, since it was a summative evaluation, the intention was to carry every participant along

The respondents were made up of adults with visual impairment, physical disabilities, intellectual disability and those with leprosy. It also includes a supervisor, volunteers and field workers who had provided services in the institution and communities over the years. It included those who were born with or acquired the disabilities later in life regardless of their degree of impairments. The table below shows the distribution of the sample.

**Table 2:** Showing Distribution of the Sample

LGAs	PWDs	Supervisor	Field Workers	Volunteers	Total
Mangu	874	1	2	37	914
Pankshin	167	0	1	8	176
Bokkos	248	0	1	15	264
Barikin Ladi	571	0	1	20	592
<b>TOTAL</b>	<b>1,860</b>	<b>1</b>	<b>5</b>	<b>80</b>	<b>1,946</b>

(Source: COCIN Hospital and Rehabilitation Centre, Mangu, 2018)

**3.2.2 Method of Data Analysis**

The data obtained through the questionnaires were analysed using descriptive statistics, the research instruments were analysed of mean scores and standard deviation using the SPSS Version 2.0. Hence, research question one was analysed using frequency counts and simple percentage. This was necessary in order to present the information in numerical perspectives and facilitating the readers understanding. The simple rules for decision making was that any mean score in the range of 3.00 and above was considered to be high and accept as high impact while mean score less than 3.00 was not considered for high impact but was noted. The formula for calculating mean score is given below:

$$\bar{X} = \frac{\sum FX}{N}$$

Where:

- $\bar{X}$  = Mean score
- $\sum FX$  = Summation of frequency of score multiply by the midpoints
- N = Total number of the respondents

Similarly, the formula for calculating standard deviation is given as thus:

$$SD = \sqrt{\frac{\sum(X - \bar{X})^2}{n - 1}}$$

Where:

- SD = Standard deviation
- $\sum$  = Sum of scores squared
- X = Score
- $\bar{X}$  = Mean of distribution
- n = Number of cases

#### 4. Results and Discussion

This chapter presented the results and discussion of findings. The results are presented in tables each according to the research questions raised in section one. There were six research questions posed to guide the researcher according to the CBR Components of the matrix. Data were analysed using mean and standard deviation, SPSS statistical package 2.0 was used. Total of 1,946 questionnaires were administered and 1,916 were returned and analysed which comprised 1,835 CBR-Q and 81 RS-Q.

#### Results

##### 4.1.1 Research Question One

The research questions for the pilot study are the same as the ones stated in section one of the main study as stated below.

**Question 1:** What are the categories and numbers of persons with disabilities receiving intervention in the CBR programme?

**Table 3:** Frequency and Percentage on Categories of persons with Disabilities

Types of Disability	Frequency	Percentage
Persons with Deafness	771	42.0
Persons with Blindness	165	9.00
Intellectual Disability	165	9.00
Physical disability	716	39.0
People with leprosy	18	1.00
<b>Total</b>	<b>1,835</b>	<b>100.00</b>

Table 3 shows the categories and percentage of persons with disabilities who received services from the CBR programme. Thus 771(42%) were persons with deafness, 165(9%) were persons with blindness and 165(9%) had intellectual disabilities, 716(39%) had physical disability and 18(1%) had leprosy. This shows that there were more of persons with deafness and those with physical disability who benefitted from the CBR programme than other categories of persons with disabilities.

##### 4.1.2 Research Question Three

In what way does the CBR programme impact or not, access to education for persons with disabilities in Plateau State?

**Table 6:** Mean and Standard Deviation on Access to Education for persons with Disabilities

S/No On questionnaire	Education Component	Response						$\bar{X}$	SD
		SA	A	U	D	SD			
	The CBR programme provides for early childhood development in the community	371	489	200	275	500	2.97	1.06	
	There is free and compulsory access to basic education for persons with disabilities in the community	700	200	110	410	415	3.19	1.99	
	The programme has improved enrolment of persons with disabilities in higher education in the community	620	450	185	430	150	3.52	1.89	
	The CBR programme has influenced the special/transitory educational services for persons with disabilities	570	210	250	565	240	3.17	1.59	
	Adult literacy programme and non-formal education have been established to include persons with disabilities	230	343	170	602	490	2.58	1.35	
	Grand Mean						3.09		

The data in table 6 indicates that of the one thousand eight hundred and thirty-five (1,835) persons with disabilities that participated in the study, the grand mean of 3.09 is above the acceptable mean of 3.00. This means that the Education component of the CBR programme has high impact on the Education of persons with disabilities in Plateau State. Such components with high mean scores are items 7, 8 and 9. However, items 6 and 10 had low responses because the mean score were below the acceptable mean of 3.00.

**Table 7: Mean and Standard Deviation on CBR Rating Scale of Education Component**

S/No	On questionnaire	Education Component	Rating Scale					$\bar{X}$	SD
			VA	A	No	IA	VI		
		CBR provides early children playground	29	25	5	10	12	3.61	1.19
		CBR ensures availability of toys	12	12	7	26	24	2.53	0.90
		PWDs goes on excursion for learning experience	9	11	0	22	39	2.12	1.52
		CBR provides adult literacy programme	12	20	8	12	29	2.68	1.17
		CBR ensures barrier free environment	22	39	3	7	10	3.69	2.70
		CBR provides access to higher education	35	30	5	4	6	4.00	2.56
		CBR provides braille machine, slate and stylus	28	21	10	19	3	3.64	2.58
		CBR provides special teachers	18	35	1	12	15	3.65	2.45
		IEA programme	13	12	2	30	24	2.51	1.81
		Grand Mean						3.16	

The content and indices of the rating scale instrument on education component indicates that the grand mean score of 3.16 is above the acceptable mean of 3.00. This implies that the education component of CBR programme was rated to be adequate. Such components rated adequate are items 12, 16, 17, 18 ad 19. However, items 13, 14, 15 and 20 were rated to be inadequate because they had mean scores that were below the acceptable mean score of 3.00.

#### 4.2 Discussion Of Findings

The data collected from the main study revealed that persons with disabilities who are receiving intervention in the CBR programme are not the same. Results indicated that five categories of persons with disabilities are receiving intervention in the CBR programme in Plateau State. They are those with hearing impairment, visual impairment, intellectual and physical disabilities as well as those with leprosy. The data collected shows percentage, mean and standard deviation scores of respondents to questionnaire items. See table 3 for clarity of facts. From the data analyzed, all persons with disabilities who are receiving intervention in the CBR programme are not the same in number (Population).

Earlier, Obani (2006) stated that persons with disabilities are those who, because of circumstances of birth or of life have physical, intellectual, social or psychological impairment that make it difficult for them to live a normal life. These include those who have hearing, visual, mental and physical (mobility) difficulties that need rehabilitation. The author posited that these group; deserve good quality of life in the areas of health, education, livelihood, social development and empowerment as outlined in the

CBR matrix. Thus, in-line with the definition of rehabilitation by the Federal Republic of Nigeria (2010) That rehabilitation is not only the training of persons with disabilities but also the intervention of the general system of society, adaptation of the environment, the protection of human rights and empowerment of persons with disabilities in the society. Rehabilitation efforts are being provided in Plateau State where the main study took place.

Result of research question three showed that the CBR programme influenced access to education for persons with disabilities in the study areas. This can be deduced from the mean and standard deviation scores of the respondents. These scores are high enough to enable the researcher draw conclusion that the CBR programme influenced access to the education of persons with disabilities. It was shown that the CBR programme produced free and compulsory access to basic education, improved enrolment, and influenced special transitory and educational services for persons with disabilities in the study areas. This was equally corroborated by the results of the rating scale where it shows that provisions were made for early children’s playground, barrier-free environment, and access to higher educational scholarship, provisions of special equipment as well as special teachers to boost access to education for persons with disability.

In-line with this finding, WHO (2010) stated that the education component impressed on access to quality education for persons with disabilities at all levels. This includes primary, secondary and higher education. Others are non-formal education and life-long learning. The education component also enables education structures, systems and methodologies to

meet the educational needs of all children, including providing participatory, accessible and inclusive monitoring and assessment structures in an institution.

Furthermore, though findings showed that the CBR programme influenced access to the education of persons with special needs, it was not an inclusive educational facility. This is contrary to the National Policy on Education (2009) which stated that the education and rehabilitation of persons with disabilities shall be inclusive and that education shall be equalized irrespective of their physical sensory, mental, psychological or emotional disabilities. More importantly, there shall be a diversified and appropriate curriculum. The Presbyterian Centre (2018) argued that the impact of education must be felt on the part of persons with disabilities. However, this can only be appreciated when there is periodic evaluation of the programme to ascertain that its objectives are achieved. Coleridge (1993) explained that as a result of various disabilities report a change in community attitude, persons with disabilities also attest to the fact that CBR programme increased access to some public buildings, which in turn, helps increased social integration of persons with disabilities, the findings of the study equally attest to this fact.

### 5. Conclusion and Policy Recommendations

This study assessed the impact of Community Based Rehabilitation (CBR) on education of persons with disabilities (PWDs) in Plateau State, Nigeria. This study is hinged on Kirkpatrick (1959) evaluation model with descriptive statistics used as a method a method of evaluation. The data collected from the main study revealed that persons with disabilities who are receiving intervention in the CBR programme are not the same. Results indicated that five categories of persons with disabilities are receiving intervention in the CBR programme in Plateau State. They are those with hearing impairment, visual impairment, intellectual and physical disabilities as well as those with leprosy. Rehabilitation efforts are being provided in Plateau State where the main study took place. Result of research question three showed that the CBR programme influenced access to education for persons with disabilities in the study areas. It was shown that the CBR programme produced free and compulsory access to basic education, improved enrolment, and influenced special transitory and educational services for persons with disabilities in the study areas.

It is, therefore, recommended that authorities should ensure that the impact of education must be felt on the part of persons with disabilities. However, this can only be appreciated when there is periodic evaluation of the programme to ascertain that its objectives are achieved. There is need for a change in community attitude and CBR programmes so that persons with disabilities will have increased access to some public buildings, which in turn, will help increased social integration of persons with disabilities, the findings of the study equally attest to this fact. More importantly, there shall be a diversified and appropriate curriculum.

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