Research Journal of Biological Sciences 11 (2): 75-88, 2016
ISSN: 1815-8846

The Use of Rational-Emotive Behavior Therapy to Address the Ebola Outbreaks in the African Region

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Abstract: Previous researches as well as media reports indicate that irrational health beliefs held by people was an impediment to the Ebola prevention efforts in the African region, especially in West Africa where the epidemic became seriously widespread. Although, it is possible to achieve a laudable defeat of the Ebola epidemic in part by restructuring people's problematic beliefs about it, those who had been affected may begin to show emotional distress, anxiety, depressive symptoms, post-traumatic stress syndrome and other psychopathology in the post Ebola era. This being the case, this study describes how rational-emotive behavior therapy theory can be applied to help in the fight against the epidemic. The study systematically explored REBT therapists' perspective on the use of rational-emotive behavior therapy interventions to address resistance against prevention efforts and increase community engagement against Ebola outbreaks in the African region in case of re-emergence in affected areas and/or emergence in previously unaffected communities; provide cognitive-behavioral based psychosocial support counseling for Ebola survivors and their familie and mitigate the perceived emotional distress, anxiety, depressive symptoms, post-traumatic stress syndrome and other psychopathology arising from the Ebola epidemic experience. We identified 600 REBT therapists from South-Eastern part of Nigeria and included them in this study through simple random sampling from the target population. Results show that the therapists indicated that REBT would be applicable and beneficial if used to address the Ebola virus disease outbreaks in the African region. We therefore concluded that a well-designed REBT health education prevention program that is culturally-sensitive is capable of helping community members and families not only to engage and cooperate with medical staff, national governments and international organizations in the management and containment of the Ebola virus disease but also effect a smooth psychosocial adjustments and overcome associated psychopathologies. The study's limitations and implication for research and practice are also discussed.

Key words: African region, Ebola hemorrhage fever, REBT, Rational-Emotive Health Education Prevention Program (REHEPP), West Africa

INTRODUCTION

The Ebola virus epidemic has been recognized as the most severe public health emergency seen in modern times. Its impact went beyond physical health, affecting every part of society, impeding the delivery of basic services, affecting the economic sustainability of individuals and countries and jeopardizing social cohesion. The Ebola virus first appeared in 1976 in two simultaneous outbreaks, one in Nzara, Sudan and the other in Yambuku, the Democratic Republic of Congo. The latter occurred in a village near the Ebola river, from which the disease takes its name.

As the Ebola virus disease outbreak especially in West Africa was considered a very challenging public health problem for both national governments and international health organizations (despite the huge financial commitment in the use of biomedical models), there may be a need to develop cognitive-behavioral programs targeted at combating the epidemic if it resurfaces.

With the Ebola epidemic, there have been concerted efforts to educate the masses about the Ebola Virus Disease (EVD) in the African region and other parts of the world. In fact, the response to the Ebola epidemic by the

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American Psychological Association (APA) and the United Nations Educational Scientific and Cultural Organization (UNESCO) shows that the Ebola crisis truly attracted attention of both the psychologists and educators. In both formal and non-formal education programs, UNESCO supported the development and dissemination of learning resource materials with accurate messages on Ebola prevention, care and other health issues.

Additionally, the APA also played a role by educating the public on how to manage fears about Ebola (Clay, 2014). Several international health organizations such as the Center for Disease Control and Prevention (CDC) and the World Health Organization (WHO), along with other United States government agencies and international partners, are also taking active steps to respond to the Ebola outbreak in the African region.

But there was a resurfacing of the Ebola virus in the West African region of Liberia which had already been declared Ebola-free by the World Health Organization. From an epidemiological perspective, the CDC estimated that for every month of delay in reaching the 70% Ebola prevention target rate, the number of patients will increase, resulting in further cases, further deaths and the need for even more beds and other resources. In this respect, the WHO stated that community engagement is the key to successfully controlling the Ebola outbreaks. In addition, Briand stressed that it is also necessary to promote a better understanding of perceptions, beliefs and local practices to address fear, misconceptions and stigma and to work with the community to stop this outbreak with culturally accepted measures.

Therefore, the need for a behavior change program becomes very important to help overcome community resistance against prevention efforts in the case of emergence in unaffected communities, in order to manage and contain the spread of the Ebola hemorrhage fever in the region should it resurface. In order to contribute to the numerous ways of achieving this, the present study focuses on investigating therapists' perspective on the use of Rational-Emotive Behavior Therapy (REBT) to address resistance against Ebola outbreak prevention efforts in the African region and to illustrate how REBT approach can be adapted as per health promotion and used to dispute irrational health beliefs held by people in the region, thereby overcoming community resistance, increasing understanding and promoting cooperation in the fight against the Ebola virus disease in case it breaks out in any part of the region again.

The purpose of the present study is also reinforced by the fact that REBT is based on the concept that emotions and behaviors result from cognitive processes; and that it is possible for human beings to modify such processes to achieve different ways of feeling and behaving (Froggatt, 2005).

Unarguably, REBT can be used to help people deal with depression, stop anxiety, deal with stress and manage anger associated with Ebola virus disease outbreak. Previous studies that specifically summarized REBT clinical trials showed that REBT works for a large spectrum of disorders both in adults (Engels *et al*., 1993; Lyons and Woods, 1991) and children (Gonzale *et al*., 2004).

Additionally, numerous clinical trials published under the generic label of CBT, supporting its effectiveness, use exclusively and/or as an important component, REBT strategies, as described in REBT manuals (e.g., Montgomery *et al*., 2009). But despite the optimistic image of the impact of REBT in clinical practice, less is known yet, in terms of empirical evidence, about the use of REBT for health promotion, as compared to the use of REBT in the clinical field.

To this end we consider this study, a bold step in the right direction, towards validating the potentiality of REBT approach in health promotion and awareness by arguing for and investigating the possibility of using REBT approach to fight against Ebola outbreaks in the African region and its attendant cognitive-behavioral consequences. Common Ebola-specific irrational beliefs in the African region.

REBT is founded on the insight that beliefs expressed through self-talk can be rational or irrational. A rational belief is one that can be defended as realistic, reflecting genuine real-world events. On the other hand, irrational belief is one that is illogical, non-empirical and non-pragmatic and generates dysfunctional consequences such as dysfunctional feelings, maladaptive behaviors and unhealthy emotional-behavioral reactions.

Any irrational belief stems from a core 'should', 'must', 'have to', 'need to' statement. The illogical inferences of low frustration tolerance, awfulizing and self or other downing (global rating) all flow from the demands for comfort, love and approval and success or achievement.

Eseadi *et al*. (2015) stated that irrational beliefs are theoretical/hypothetical variable that is believed to correlate with or cause emotional disturbance. Irrational beliefs in this study refer to non-empirical, self-defeating,

illogical thoughts or interpretations held by people regarding an event or situation. Consequently, when such thoughts are internalized it could make them emotionally disturbed (Ellis, 1962).

The ultimate goals of REBT are to teach clients to think more rationally, to feel more appropriately and to behave more adaptively. The REBT theory has been shown to work in both individual and group counseling settings. Because REBT teaches clients to monitor and alter their thoughts, feelings and behaviors it teaches clients to help themselves (Net Industries, 2015).

This feature, according to Net Industries is one of its greatest strengths and is reflected in low relapse rates, compared to drug treatment in the absence of any accompanying therapy and further advantages of REBT include its rapid symptom reduction and the short duration of therapy; therapeutic goals are frequently achieved within 10-20 sessions.

With these mind we deemed it necessary to bring to the discourse from an interdisciplinary standpoint, the Ebola virus disease issue in relation to REBT theory in that a large amount of studies exploring the beliefs held by people about the Ebola hemorrhage fever in the African region demonstrates that specific beliefs about Ebola are irrational. Such studies have shown that stigmatization, traditional healing practices, caregiving especially by women, traditional African burials that include communal washing of bodies and cultural beliefs about illness are contributing to the many cases of Ebola spreading throughout the African region (Hewlett and Amola, 2003; MacNeil and Rollin, 2012).

According to Hewlett and Amola (2003), these are culture-based beliefs and practices of people involved in the Ebola outbreak in the African region and they reflect a holistic and social view of illness common to many people in the world. Most communities in the region are aware of the biomedical model but view illness as having social, spiritual, political and biological dimensions. For example, the Zaire Ebola virus outbreak in the Democratic Republic of the Congo in 2002-2003 was thought by certain ethnic groups to be caused by sorcery while others attributed it to the pygmy population who were thought to be 'dirty disease spreaders' (Hewlett *et al*., 2005).

Geary noted that at the height of the Ebola outbreak, there was an abundance of misinformation concerning the Ebola virus within the African community, very much predicated on old cultural and health beliefs; one concern was that it was the 'whites' who were effectively introducing the virus to them. According to Baobab Africa when an Ebola epidemic gripped Sierra Leone for the first time, many people in the country refused to accept that the disease could be tackled by western medicine and preferred to use traditional healers instead; this made it spread more quickly.

By holding such unyielding beliefs it becomes almost impossible to respond to situations like this in a psychologically healthy way. In addition, most people held the belief that the Ebola virus disease could be airborne waterborne or spread by food, however, health agencies have stated that transmission is only through direct contact with infected bodily fluids, infected objects or infected animals.

People with such health beliefs could be considered as irrational in this context. They are capable of misinforming others and invariably impede prevention efforts. There are also several other irrational health beliefs held by people about Ebola within the African region which are serious barriers to the management and containment of the spread of this epidemic in the affected countries. Such illogical beliefs in part informed our interests toward the present study with a view to illustrating how they could be disputed using the A-B-C-D-E model of Rational-Emotive Behavior Therapy (REBT).

Consequences of irrational beliefs about Ebola: With the consistent irrational health beliefs held about Ebola in the affected nations of West Africa, common mental disorders such as anxiety and depressive disorders and post-traumatic stress disorder are to be expected (Shultz *et al*., 2015). Risk factors for such common mental health problems, according to Shultz *et al*. (2015) include population-wide exposures to trauma, such as witnessing and caring for individuals who are severely ill, perceived life threat, substantial mortality and bereavement, the orphaning of children, the deaths of trained healthcare workers, food and resource insecurity, discrimination against affected families and national stigma.

According to Geary, not knowing the entity of the Ebola virus infection breeds fear-one that is often irrational because people do not know or understand the facts. The World Health Organization also observed that in some cases, community resistance against Ebola prevention efforts turns into violence. In 2015, as cases of Ebola began to appear in Tanene, Dubreka Prefecture, Guinea, an area that had previously been unaffected, the ambulance shown in Fig. 1 was burned after community members stopped the vehicle to remove a patient and take him home in Guinea.

Fig. 1: WHO/P. Haughton photograph of burnt vehicle during Ebola resistance in Guinea in June 2015

Fig. 2: BBC photograph of Ebola crisis as patients vanish in Liberia on August 17, 2014

As shown in Fig. 2, during the Ebola outbreak in Liberia, an angry mob was reported to have attacked the Ebola Treatment Unit (ETU) in Monrovia. The Assistant Health Minister was reportedly said that protesters were unhappy about patients being brought in from other parts of the capital. Other reports suggested that the protesters believed Ebola was a hoax and wanted to force the quarantine center to close. The attack at Monrovia was seen as a major setback in the struggle to halt the outbreak.

According to Briand, misunderstanding of the disease and beliefs within communities including conspiracy theories lead to fear, panic and resistance to proposed response measures. Cole and Jacobs stated that for people with friends and family in African countries impacted by Ebola outbreaks, concern and anxiety may be magnified given the nature of the disease and that it can be particularly difficult to watch events that may impact loved ones unfold from a distance, resulting in feelings of helplessness. Such news about the spread of Ebola may also give rise to feelings of stress and fear of the future.

Shultz *et al.* (2015) argued that in West Africa, Ebola virus disease arouses fear behaviors, partly because many have witnessed the graphic hemorrhagic manifestations of those infected and the bodies of those who have died.

The corpses and bedding of patients who have died pose infection hazards to healthcare workers and family members. Ebola poses specific problem behaviors such as stigmatization, isolation, fear and possible abandonment for the affected people, their caregivers and responders.

With regard to the Ebola epidemic, we feel that the families in African communities may be categorized into three groups, namely, Ebola-infected families, Ebola-affected families and Ebola-unaffected families.

Ebola-infected Families: These are families of whom one member(s) is infected with the Ebola virus. Some such families are said to have harbored their symptomatic relatives at home rather than transport them to Ebola treatment units; others have performed secret burials, preparing the bodies of deceased loved ones and have become infected (Shultz *et al*., 2015).

A study revealed that the Ebola-infected families-in addition to the enormous loss of loved ones lose an incredible amount of family assets in trying to treat the ill (Hewlett and Amola, 2003). The focus of a rational-emotive health education prevention program will include but not be limited to, encouragement of family members, total acceptance of the reality of the situation and taking healthy and rational steps to avoid contagion.

Ebola-affected families: These are families that have familial bond with those infected by EHF. The Ebola-affected families may experience emotional disengagement from relatives diagnosed as Ebola patients. Thus, the focus of a rational-emotive health education prevention program would also include the development of emotional support. The REBT education should be able to alleviate fear behaviors and address the mental health needs of Ebola-affected communities.

Ebola-unaffected families: These are families that are neither related to the infected, nor the affected families. They do not have a familial bond with either of these two groups. They are usually considered as rumor carriers and find it difficult to believe that Ebola is real. The news of Ebola virus outbreak could have profound effect on these people, even though they are not directly harmed by it.

The focus of a rational-emotive health education prevention program would be that of awareness creation. The families would need to be sensitized and have their thoughts cognitively restructured about the reality of the Ebola hemorrhage fever and the need to report suspected cases.

As part of the program, they would be made to understand the symptoms of Ebola virus disease and the need to be part of community engagement in the fight against its spread.

REBT approach to overcoming community resistance against Ebola prevention efforts: When EHF continued to devastate the West African region, several efforts were being made by public health officials to educate the affected African populations on how the virus is spread and how to be protected in part by distributing literature in the native language of the people and in English. Also, enlisting village elders to cooperate by helping to isolate ill patients and calming fears seems to have led to less severe outbreaks.

However, community resistance to the Ebola response posed an issue in some of the African regions, especially Guinea, as some of the population refused to believe that Ebola is real. Taking this into account, international agencies, including the WHO and CDC and international cum national health agencies, must continually adapt their approaches to take into account community reactions and combat misinformation in disease outbreak prevention efforts.

As illustrated in Fig. 3, one approach that may be adaptable for effective Ebola prevention efforts and that can take into account individuals' emotional-behavioral reactions and target their culturally-based beliefs, is the rational-emotive behavior therapy which we think can be extended for health promotion.

Biruk stated that action-oriented approaches are crucial in improving the management and containment of the Ebola hemorrhage fever in the West African region. REBT as an action-oriented approach to psychotherapy (Campbell, 2004; Ellis *et al*., 1998) could be applied to re-educate communities in the region and change their irrational health beliefs and emotional-behavioral reactions regarding the Ebola hemorrhage fever, as such beliefs and reactions are known to impede the prevention efforts of national governments and international bodies.

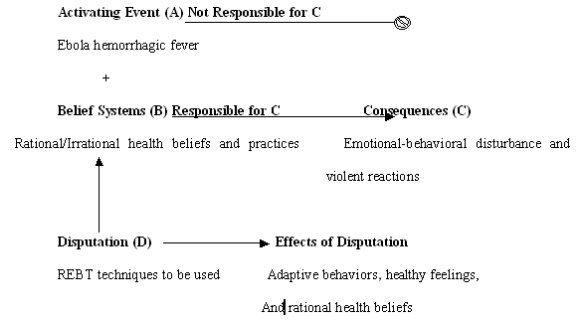

Fig. 3: Illustration of Rational-emotive Health Education Prevention Approach (REHEPP) with expected outcome

This would require an adaptation and/or extension of Rational-Emotive Behavior Therapy (REBT) to health education and thus, may result in what could be described as a Rational-emotive Health Education Prevention Program (REHEPP). In the context of Ebola control and prevention, the rational-emotive health education prevention program should be seen as a behavior change program capable of disputing the irrational health beliefs of communities that promote the spread of the Ebola hemorrhagic fever.

To clarify, the REHEPP could be applied in disputing the irrational health beliefs that account for community resistance against Ebola prevention efforts in the African region. The rational-emotive health education prevention program is an extension of REBT developed by Albert and Debbie (2011). This is based on the idea that people's reaction to an event is the result of the interpretation they give to that specific event (Ellis, 1977). Ellis stated that people experience activating events (A) every day that prompt them to look at, interpret or otherwise think about what is happening.

Their interpretation of these events results in specific beliefs (B) about the event, the world and their role in the event. Once this belief which could be rational or irrational, is developed it leads to the exhibited behavior (consequence), that is, the emotional-behavioral consequence of A+B. The role of the therapist is to dispute the Irrational Belief (IB) held by the client.

According to Digiuseppe and Bernard (2006), one of the basic assumptions in REBT is that most of the emotional-behavioral problems people exhibit are a consequence of their irrational beliefs. Therefore, if therapists wish to decrease irrational beliefs, maladaptive behaviors and emotions regarding the Ebola hemorrhage fever, the best way to achieve this would be to enhance rational thinking about Ebola. In fact, apart from providing a comprehensive approach to the emotional-behavioral aspects of human disturbance, REBT places a great deal of emphasis on the thinking component (Knaus, 1974).

The rational-emotive health education prevention program should also seek to follow the rational-emotive education approach by Dr. William J. Knaus which is seen as an extension of Albert Ellis's REBT. This promotes an effective preventive-interventional mental health program through which children and adolescents learn positive rational mental health concepts and the skills to apply these concepts in everyday life.

The rational-emotive education is seen as a positive, preventive, interventionist psychological educational program that teaches rational, critical thinking skills and effective psychological problem-solving methods to individuals, who can apply such skills throughout their

lives to cope effectively with the inevitable changes and challenges they will meet. The rational-emotive education program helps the individual to boost resiliency, build critical thinking resources, develop coping competencies, advance general reasoning skills, tolerate frustration and maintain a realistic perspective.

This psychological education program is economical and consists of a structured series of mental health lessons that teachers and mental health professionals can deliver (Knaus, 1977, 2006). With these in mind, we feel that therapists and surveillance teams will find REBT more practicable and effective if the approach is extended and made more culturally-sensitive and relevant to the African communities' context to combat the Ebola epidemic. This may help to prevent the spreading of Ebola hemorrhagic fever and to finally overcome the epidemic (Fig. 3).

In this respect, a culturally-sensitive rational-emotive health education prevention program would explore the culturally-based irrational health beliefs that impede the Ebola prevention efforts, dispute such forms of illogical beliefs and create emotional-behavioral effects and feelings that promote Ebola prevention efforts in the African community by re-education. This can be possible as Froggatt (2005) had emphasized that REBT has been developed over the years for use with individuals, families, adults and children; people with mental health problems; people with physical illnesses; terminal illnesses; and from different cultural groups.

REBT therapists use the REBT approach to help people alter illogical beliefs and negative thinking patterns in order to overcome psychological problems and mental distress (Ellis *et al*., 1998). Just as Ellis (1977) illustrated the relationship between cognition and emotional-behavioral disturbance with the A-B-C model of REBT, so can one also use the A, B, C model to illustrate and dispute irrational health beliefs held by individuals about Ebola.

Based on the hypothesis of REBT and with regard to this present study, the "Activating Event" (A) is the Ebola hemorrhage fever outbreak (Fig. 3). According to Froggatt (2005), REBT is a method of psychotherapy, so the emphasis is on helping people change how they feel and behave in reaction to life events.

However, such personal change may be a prelude to enabling a person to more effectively seek environmental change. Consequently, REBT helps people change themselves and their unwanted circumstances.

From Fig. 3 it can be seen that an important part of REBT is the point at which the irrational beliefs at "B" are disputed. This is the "D" which is known as disputation. Disputation is responsible for subsequent cognitive-behavioral change. Cognitive disputation is the application of direct questions, logical reasoning and persuasion to help clients learn to think reflexively. REBT focuses on two active forms of cognitive disputing, that is, the REBT therapist's vigorously disputing clients' irrational thinking and the REBT therapist's teaching clients how to carry out their own self-disputing, so that they internalize the technique and use it to surrender their present and future absolutistic cognitions.

According to Wilde, disputation takes many forms but the goals of each technique are the same, namely, to get the client to examine their beliefs and philosophies about life and determine whether or not they make sense. Active cognitive disputation is favored by REBT for several reasons, namely it is a highly democratic procedure that avoids indoctrinating clients with the therapist's "rational" beliefs; it helps clients make their own generalizations which may lead to many and more profound emotional and behavioral changes; it appears to help clients not only achieve but also sustain their improvement; and it shows clients how to dispute the irrational thoughts of their relatives, friends and associates and frequently to help these people and the clients' relationships with them (Ellis, 1977, 1962).

Thus with active cognitive disputation, new effective beliefs (E) will ensue amongst the people and invariably lead to more adaptive and healthy emotional-behavioral feelings (F) about the Ebola hemorrhage fever should it hit their community.

The plan for implementation of REBT during Ebola virus disease outbreak: Health experts stated in a BBC report that the key to ending the Ebola outbreak was to stop it spreading in [countries] where ignorance about the virus is high and many people are reluctant to cooperate with medical staff. In order to achieve such goal, we believe the people's thoughts and feelings about Ebola hemorrhage fever must first be disputed and restructured and this could be achievable through a rational-emotive health education prevention program. Shultz *et al*. (2015) decried that the absence of mental health and psychosocial support systems and the lack of well-trained mental health professionals in Ebola-affected West African countries amplified the risks of enduring psychological distress and progression to psychopathology.

In this context, the surveillance team and medical staff could be trained in the use of REBT to help in the delivery of a rational-emotive health education program about Ebola.

The surveillance team includes a group of individuals in the public health surveillance system established, to immediately detect and report cases of illness compatible

with Ebola virus disease or any other unusual health event possibly associated with the virus. Upon detection of a possible Ebola virus disease event, this rapid response team is expected to investigate and conduct initial controls, including systematic contact tracing. Beside this it would be more responsive to employ the services of mental health professionals who would mount cognitive-behavioral programs to assist in combating the spread of the Ebola virus.

A nationally representative poll by Steel Fisher which was related to the African scenario, indicated that people with less education are less likely to be following the news about the Ebola outbreak in West Africa closely. Therefore it is also necessary to train experts possibly teachers, anthropologists and other health conscious volunteers in a culturally sensitive and relevant REBT health education approach so that they can learn how to dispute the irrational health beliefs held by people regarding Ebola virus disease, based on the A-B-C model of REBT.

Briand suggested that more engagement with teachers is needed to stop the outbreak. This is necessary due to the fact that outcomes of investigations and also news reports by media houses have clearly indicated that certain cultural practices contribute to the irrational health beliefs of people in the Africa region and that lack of education has certainly played a role in the rapid spread of Ebola in West Africa. Yet the amount of attention paid to the ignorance and irrationality of the people living in these developing countries has remained unbalanced when compared to other parts of the world. A balance in people's perception about the Ebola virus could be achieved using the rational-emotive health education prevention program.

According to the World Health Organization, children are one of the keys to ensuring messages are successfully integrated into communities, as messages they are taught in school or in discussions with Ebola teams are taken back to their families, some of whom cannot receive the messages directly. In Guinea, the youth often have a strong influence on discourse and beliefs within the community around issues such as Ebola. Thus, the rational-emotive health education prevention program could also be beneficial for disputing irrational health beliefs held by youths and children about the Ebola hemorrhage fever and its programs can be communicated to the larger parts of the communities using youths and children.

According to Digiuseppe and Bernard (2006), REBT child-oriented practitioners employ several principles and guidelines when taking into account the child's cognitive status. For these authors, the basic REBT attitudes, insights, concepts and beliefs are taught to children through intensive analyses of specific situations. Child-oriented REBT practice has always taken into account the child's cognitive-developmental status in selecting appropriate cognitive assessment and intervention procedures (Vernon and Clemente, 2006).

Bernard and Joyce (1984) stated that many children do not have the cognitive capacity to: recognize their general irrational beliefs when they are presented as a hypothetical proposition; rationally restate irrational as rational beliefs and utilize and generalize their rationally restated belief as rational self-statements in all situations (where they are treated unfairly). Thus it is very important for the REBT practitioners to be thoroughly familiar with the different types of cognitions (inferences, absolutes, evaluations) that REBT hypothesizes as leading to different emotional disorders as this will assist in helping children and young people become more self-aware of the specific cognitions leading to their specific emotional reactions (Digiuseppe and Bernard, 2006).

Because we seem to argue for the training of other professionals in the REBT approach and allow them work alongside REBT professionals to combat resistance against the Ebola epidemic it should be noted that REBT is 'selectively eclectic' (Froggatt, 2005).

Ellis recommends a 'selectively eclectic' approach to therapy, using strategies from REBT and other approaches but ensuring the strategy is compatible with REBT theory. Therefore, even though it has techniques of its own it also borrows from other approaches and allows practitioners to use their imagination. There are some basic assumptions and principles but otherwise it can be varied to suit one's own style and client group. REBT is educative and collaborative. Clients learn the therapy and how to use it on themselves (rather than have it 'done to them').

The therapist provides the training the client carries it out. There are no hidden agendas all procedures are clearly explained to the client. Therapist and client together design homework assignments. The relationship between therapist and client is very important but is seen as existing to facilitate therapeutic work rather than being the therapy itself. The therapist shows empathy, unconditional acceptance and encouragement; but is careful to avoid activities that create dependency or strengthen any 'needs' for approval.

While REBT is active-directive, the therapist almost always works within the client's value system and as such new ways of thinking are developed collaboratively (Froggatt, 2005).

David pointed out that REBT uses a large variety of cognitive restructuring techniques: logical, empirical; pragmatic; emotive/metaphorical (e.g., metaphors, stories, poems, humor, songs, meditation/mindfulness-based REBT etc.); spiritual; behavioral (fundamental to change not only conscious beliefs but also implicit processes/unconscious information processing. Moreover, beyond these core REBT cognitive restructuring techniques, REBT agrees with the use of any safe technique borrowed from other psychotherapy schools. These techniques, however, are separated from their original theories, being used in a new "cognitive framework". REBT thus proves eclectic at the practical level, a real platform for a possible psychotherapy integration.

According to a recent WHO's Ebola situation report, a network of clinical services for survivors is also being expanded in Liberia and Sierra Leone, with plans for comprehensive national policies for the care of EVD survivors. Given these plans and the possibility of outbreak and the fact that deployment of rapid-response teams following the detection of a new confirmed case will continue to be a cornerstone of the national response strategy in Guinea, Liberia and Sierra Leone, we argue for the implementation of cognitive-behavioral therapy programs to be included in the policy as necessary for the Ebola-affected communities, Ebola-unaffected communities and Ebola survivors and their families bearing in mind that such programs can be cost-effective (Klarreich *et al*., 1987; Sava *et al*., 2009).

Expected outcomes when REBT is used for prevention of Ebola outbreak resistance. With regard to Fig. 3 it is expected that through the rational-emotive health education prevention program on Ebola virus disease, people's irrational health beliefs would be changed by disputation and they would become rational and adaptive.

Therefore, ensuring that people develop new effective beliefs about Ebola through the process of disputation is essential for addressing resistance against prevention efforts of the Ebola outbreaks in the African region. The new effective beliefs will replace their self-defeating thoughts, irrational interpretations, unhealthy emotions, dysfunctional and maladaptive behavior with helpful, healthy, functional and adaptive behavior and healthy emotions to promote emotional well-being and goal achievement.

The community members including the students would learn to understand how their health beliefs (B) have a significant influence on their behavior and emotions (C) about the Ebola hemorrhage fever. This would be useful, as many believe that their behavior and emotional upset is directly related to (A), i.e., Ebola hemorrhage fever and is the reason why they feel angry or depressed. With this insight they would be empowered to learn how to manage destructive negative emotions and behaviors regarding this epidemic and be able to focus attention on cooperation with national governments and international health agencies.

This in effect will help foster community engagement in the fight against Ebola. Briand stated that community engagement means that communities are involved and empowered in outbreak control measures such as community monitoring and contact tracing, community care and safe and dignified burials. With effective application of REBT it is expected that the people within the region will be re-educated to conform their thoughts to the reality of the Ebola virus disease and cooperate with both national governments and international health organizations to combat the Ebola epidemic.

Furthermore, REBT will be interested in Ebola-specific irrational beliefs' removal and primarily strives for deep-seated emotional-behavioral change arising from Ebola virus disease outbreak.

According to Ellis REBT works for a remarkably new psychological set on the part of its clients that will enable them not only to feel better and be relieved of their presenting symptoms but also to bring a radically revised outlook to all new, present and future situations that will semi-automatically help them to stop disturbing themselves, in the first place or to quickly undisturb themselves, in the second place. This new outlook for which REBT strives includes clients' acquiring philosophies of self-interest, self-direction, tolerance of self and others, acceptance of uncertainty, flexibility, scientific thinking, risk-taking and commitment to vital interests (Ellis 1977, 1962).

REBT hypothesizes that if clients achieve this kind of a changed perspective, they will minimally create present and future "emotional" problems (Ellis, 1977). In other words with REBT intervention, individuals will be able to minimally create present and future emotional-behavioral problems due to Ebola in their community. With REBT, new effective beliefs and ways of thinking (E) about Ebola virus disease will ensue and will lead to adaptive and healthy emotional-behavioral feelings (F). According to Dewey the 'E" stands for the effects of changing one's interpretation of a situation or the cognitive and emotional effects of revised beliefs.

Ideally the individual takes practical action to solve the problem or has a less troublesome reaction to the situation. In this regard, Jorn stated that "E" stands for new effect or the new, more effective emotions and behaviors that result from more reasonable thinking about the original event. In this study, we consider the "E" as more Effective and new ways of thinking, feeling and behaving shown by a person, through more accurate and rational self-statements and dispositions that replaces their dysfunctional beliefs.

MATERIALS AND METHODS

Survey approval: Approval to carry out the study was obtained from the Department of Educational Foundations Faculty of Education, University of Nigeria Nsukka.

Participants: Although, the entire population of REBT practitioners remains unknown in Nigeria; there are over 3000 REBT counselors in the South-eastern part of the country. The participants for the present study were 600 REBT therapists who are registered either with the Counseling Association of Nigeria (CASSON), the Nigerian Psychological Association (NPA), the Nigerian Society of Educational Psychologists (NSEP) or the Nigerian Council of Educational Psychologists (NCEP).

These therapists were drawn from counseling clinics in two work settings in the South-eastern part of Nigeria that is, from public educational institutions and hospitals. In Nigeria it is unusual to find therapists in private counseling practice, due in part to the dearth of licensure by the government. However, they often find solace in working with clients under the auspice of the government, registered non-governmental institutions and religious bodies. South-East, the setting for the study, is one of the six geopolitical zones in Nigeria, with population of 17, 926, 290 million and covers the following states: Abia State, Anambra State, Ebonyi State, Enugu State and Imo State. The mother tongue of people from the South-east Nigeria is Igbo.

Procedure: We used a simple random sampling technique (lucky dip) to draw the required number of REBT therapists/counseling psychologists that participated in the study. The reason for the use of simple random sampling technique is to give each REBT therapist in the study's population an equal and independent chance of being included in the sample (Nworgu, 2006) and create a representative view of the entire population being studied.

By following Nworgu's guidance, the name and contact address of each REBT therapist was written on a slip of study. The slips were folded and put into a container. After a thorough reshuffling, we, not looking into the container, dipped a hand and pick one slip; unfolds the slip and record the name and contact address of the therapist in the slip without replacement.

This process was repeated until we drew the required number of REBT therapists for the current study. Although, the simple random sampling technique has been criticized for being time consuming and tedious, it should be noted that prior to the lucky dip process of the simple random sampling, we considered the respondent's familiarity with or knowledge of REBT in that being a psychologist does not translate into meaningful knowledge of the principles and practice of REBT.

In addition we devoted time and also used 5 research assistants for selecting and reaching only those identified as REBT practitioners for the present study. We also posed one research question to guide the selected therapists in their expert opinion regarding the statements in the questionnaire used for data collection as thus: With your years of experience as REBT therapist, what is your perspective regarding use of REBT to address resistance against prevention efforts of the Ebola outbreaks in the African region? The questionnaire was delivered directly to all the selected REBT therapists along with a letter explaining the purpose and significance of the study and stating that their participation was voluntary.

In addition, each respondent's informed consent was implied and they were assured of confidentiality of information they were to provide in the questionnaire. We, via the help of the research assistants, also contacted the respondents by mobile phone to know if they have had time to complete the questionnaire. The distribution and retrieval of all the questionnaires from the respondents took approximately 3 months and 1 week. Most of the respondents (33%) were able to return theirs by mail post, while for others (67%) we had to go back to retrieve theirs.

Measure: Use of REBT to address resistance against Ebola virus disease Questionnaire (UREBT-EVDQ). This is a 10 item questionnaire with a two-points rating that helped to collect data regarding therapists' perspectives on the issue raised in the literature. The responses were: Applicable and Beneficial (AB) which was weighted 1 point and Not Applicable and Not Beneficial (NANB), which was weighted 0 point. The questionnaire has two sections A and B.

Section A contains the sociodemographic information of the respondents such as sex, rank, years in practice, work setting, country of psychological training and highest educational degree; whereas Section B contains descriptors regarding the use of REBT to address resistance against prevention efforts of Ebola virus disease in the African region. The content and face validity of the instrument was checked by three REBT experts.

An exploratory factor analysis was also conducted and only factorially pure items were selected for the present study. The Kuder-Richardson 21 formula was also used to compute the reliability of the UREBT-EVDQ and it yielded a coefficient of 0.85.

Design: We used experts' opinion survey design to investigate whether REBT approach can be applied to address resistance against prevention efforts of the Ebola outbreaks in the African region. The experts' opinion survey enables researchers to investigate the opinion or perspective of experts in a given field or area of expertise towards an issue or event that is of interest to the generality of the experts in that area (Nworgu, 2006).

One unique characteristic of this particular kind of experts' opinion survey used in the current study is its structured format that provided uniform criteria for gaining an unbiased response from the respondents.

Data analysis: The statistical analysis was completed using the Statistical Package for the Social Sciences version 17.0 software for Windows (SPSS Inc., Chicago, IL, USA). The results were presented using frequency and percentage. The decision rule was that REBT items with overall percentage response scores below 50% would have been perceived by therapists as Not Applicable and Not Beneficial (NANB) whereas REBT items with overall percentage response scores of 50% and above would have been perceived as Applicable and Beneficial (AB).

RESULTS AND DISCUSSON

A total of 600 questionnaires were distributed and were returned, giving a response rate of 100%. The mean age of the REBT therapists was 49.5±8.23 (range 30-60) years. Table 1 shows the sociodemographic characteristics of the therapists that participated in the study.

From Table 2 it can be seen that 591 (98.5%) of the therapists indicated that the A, B, C model of REBT could be used to dispute irrational health beliefs associated with Ebola virus disease in the African region and help improve their overall psychosocial wellbeing, whereas only 9 (1.5%) did not see the need for extending REBT. Of all the therapists, 595 (99.2%) perceived that through REBT our people would learn to portray rational health beliefs, attitudes and behaviors if Ebola hit their community, whereas 5 (0.8%) did not feel so. Of the 600 therapists surveyed, 597 (99.5%) perceived that REBT health education could teach people how to adjust their cultural beliefs and practices to help combat the current Ebola crisis if made culturally sensitive and culturally relevant, while only 3 of the therapists (0.5%) did not think it would be beneficial. Of the 600 therapists surveyed, 581 therapists (96.8%) feel that REBT health education is essential at this time and that it would be applicable and beneficial because of the common Ebola specific irrational beliefs of most West African communities affecting prevention efforts in the region while 19 of the therapists (3.2%) did not feel this way.

Regarding whether or not REBT health education is needed to help Ebola survivors regain cognitive-affective-behavioral wellness and adjustment, 592 therapists (98.7%) agree it is necessary, whereas 8 of the therapists (1.3%) did not support this. The results in Table 2 also showed that 587 (98.7%) of the

Table 1: Sociodemographic characteristics of the therapists

Characteristic	Frequency (n = 600)	(%)
Sex		
Male	380	63.33
Female	220	36.67
Rank		
Senior counseling psychologist	90	15.00
Psychologist I	300	50.00
Psychologist II	210	35.00
Years in practice		
1-7	50	8.33
8-14	250	41.67
15-21	210	35.00
22 and above	90	15.00
Work Setting		
Educational Institution	392	65.33
Hospital	208	34.67
Country of psychological training		
Nigeria	240	40.00
United states	50	8.33
United kingdom	30	5.00
Other African countries	150	25.00
Other institutions outside Africa	130	21.67
Highest educational degree		
Masters	377	62.83
Doctoral	223	37.17

Table 2: Frequencies and percentage scores on the use of REBT to address resistance against prevention efforts of the Ebola outbreaks in the African region

	Not applicable/ Not beneficial		Applicable/beneficial		
Descriptors	Frequency	(%)	Frequency	(%)	Decision
The A-B-C model of REBT could be used to dispute irrational health beliefs associated with Ebola virus disease in African region and help improve their overall psychosocial wellbeing	9	1.5	591	98.5	AB
Through REBT our people would learn to portray rational health beliefs, attitude and behaviors if Ebola hits their community	5	0.8	595	99.2	AB
REBT health education could teach our people how to adjust their cultural beliefs and practices to help combat the current Ebola crisis if made culturally sensitive and culturally relevant	3	0.5	597	99.5	AB
REBT health education is essential at this time because the irrationality of most West African community is affecting prevention efforts in their region	19	3.2	581	96.8	AB
REBT health education is needed to help Ebola survivors regain cognitive affective-behavioral wellness and adjustment	8	1.3	592	98.7	AB
REBT health education is also needed to re-educate the masses on the reality of the Ebola virus disease and foster community engagement	13	2.2	587	97.8	AB
REBT health education is capable of helping relatives build emotional support for any of their members who are Ebola survivors	3	0.5	597	99.5	AB
REBT health education could be used to teach children and youths good health habits and protective measures against Ebola	2	0.3	598	99.7	AB
REBT health may be economical to use in prevention of further Ebola spread and seeking community's cooperation	3	0.5	597	99.5	AB
REBT has the potential to bring about a comprehensive understanding and total acceptance of the reality of Ebola virus disease and combat misinformation in African region	10	1.7	590	98.3	AB

600 therapists indicated that REBT health education is needed to re-educate the masses on the reality of the Ebola virus disease and foster community engagement, while only 13 therapists (2.2%) did not think so. Of all the therapists, 592 (98.7%) had the perspective that REBT health education is capable of helping relatives build emotional support for any family member who is an Ebola survivor. Only 3 (0.5%) out of the 600 therapists did not think so.

Table 2 also shows that 598 (99.7%) of the therapists perceived that REBT health education could be used to teach children and youths good health habits and protective measures against Ebola, while only 2 (0.3%) did not agree. Out of the 600 REBT therapists surveyed, 597 (99.5%) felt that REBT health may be economical to use in prevention of further Ebola spreading and seeking the community's cooperation, while only 3 therapists (0.5%) feel it may not be applicable and beneficial. Finally, Table 2 shows that 590 therapists (98.3%) of the 600 surveyed feel that REBT has the potential to create a comprehensive understanding and total acceptance of the reality of Ebola virus disease and combat misinformation in the African region, whereas only 10 therapists (1.7%) did not think so.

The current study focused on the use of rational-emotive behavior therapy to address resistance against prevention efforts of the Ebola outbreaks in the African region. We made use of experts' opinion survey to argue for the use of rational-emotive behavior therapy in the fight against the spread of the Ebola virus disease in the African region if it should resurface again. A greater number of the REBT therapists' perspective was that REBT would be applicable and beneficial in addressing the situation. The findings support the opinion of Biruk that action-oriented approaches are crucial in improving the response to manage and contain the Ebola hemorrhage fever in the West African region. REBT as an action-oriented and problem-solving approach can help people learn to identify the irrational self-defeating beliefs, emotions and attitudes that block the development of potential abilities and provoke conflict with the environment (Campbell, 2004).

As an action-oriented approach to psychotherapy it is designed to produce results by helping individuals manage their emotions, cognitions and behaviors (Ellis *et al*., 1998). Thus, REBT could be used by REBT counselors to manage people's emotions, cognitions and behaviors about the Ebola virus disease.

Furthermore, the findings in part support Shultz *et al*. (2015) that an effective response is essential in West Africa to address the psychosocial needs associated with population-wide direct exposure to disease, death and distress and, to counterbalance fear-driven behaviors. The authors stated that the West African pandemic provides insights into the psychological consequences associated with a "worst case scenario" event involving a highly virulent infectious disease. Thus, an effective response that includes health education programs based on REBT model will be appropriate given the behaviors and beliefs of communities in the West African region. A REBT health education promotion program would be beneficial in disputing irrational health beliefs about Ebola

that pose specific problem behaviors such as stigmatization, isolation, fear and possible abandonment.

CONCLUSION

The current study has shown that REBT as an action-oriented approach can be used to manage the cognitive, emotional and behavioral disturbances of people arising from Ebola hemorrhage fever outbreak. With respect to the demonstrated potentiality of the REBT health education program and the perspectives of the REBT therapists/counseling psychologists in this present study it is clear that REBT should be used to better respond to the challenges of Ebola virus disease when it resurfaces in any region. With an emphasis on the present Ebola crisis situation, individuals could be taught how to examine and challenge their unhelpful thinking about Ebola, which creates unhealthy emotions and self-defeating/self-sabotaging behaviors. Therefore, mental health professionals and REBT therapists are encouraged to make concerted efforts toward a rational-emotive health education program that is culturally-sensitive in response to the Ebola situation when the need arises.

LIMITATIONS

The study has some limitations that should be taken into consideration. Some might argue that the study did not cover the entire population of REBT therapists in South-Eastern Nigeria as such its findings may not be fully generalized. While we acknowledge that the findings may not be generalized to all REBT therapists in Nigeria since the sample was selected from only one out of the six geopolitical zones in the country, we wish to state that the simple random sampling technique we adopted is considered as a fair way of selecting a sample from a given population since every member is given equal opportunities of being selected (Nworgu, 2006). Again due to the sampling technique adopted, some might argue that it is time consuming and tedious. However, it should be noted that with an appropriate sample size, simple random sampling usually creates a representative view of the entire population being studied. In this current study, a sample size is considered appropriate in view of the population of REBT therapists in Nigeria where the study had taken place.

Also, the study have not investigated empirically how practically significant a REBT health education program is in the context of the Ebola crisis in the African region. The study did, however, seek the perspectives of REBT therapists regarding this issue and also demonstrated how relevant and beneficial a REBT approach could be in view of disputing irrational health beliefs and behaviors held by people in the respective communities. Future studies on the use of REBT to address the Ebola situation and other similar medical conditions should focus on providing empirical evidence with respect to the effectiveness of REBT in health promotion and prevention programs.

IMPLICATIONS

From the therapists' perspectives, the use of REBT to overcome community resistance against Ebola prevention efforts in any affected region is a very positive step. Due to their wealth of psychological training and practical experience, the fact that the majority of therapists felt that REBT would be applicable and beneficial, the implication is that a REBT health education program will be urgently needed in any Ebola-affected region to help address those attitudes, unhealthy emotions and maladaptive behaviors that can negatively impact Ebola prevention efforts. A REBT health education promotion approach should be considered as very important just as biomedical interventions and organizational support systems are – as it is clear that psychological distress among individuals in the affected West African countries has been undermining these systems so far.

Future research relating to experts' opinion on how REBT can be used to tackle a novel health condition may also use simple random sampling technique to select the required sample of REBT practitioners. According to Lund Research Limited, since the units selected for inclusion in the sample for a study are chosen using probabilistic methods, simple random sampling allows us to make generalizations from the sample to the population. This is a major advantage because such generalizations are more likely to be considered to have external validity. However, REBT researchers must bear in mind that a simple random sampling can be carried out successfully if the list of the target population is available and complete.

The study's finding is strengthened by the fact that we designated criteria for therapists to be included in the study by considering their familiarity with or knowledge of REBT in that being a psychologist does not translate into meaningful knowledge of the principles and practice of REBT. As a result, only those identified as REBT practitioners were used in the present study. The implication is that future studies seeking to find out the viewpoints of REBT practitioners regarding whether, for instance, REBT can be extended to deal with a prevailing social problem, would have to use experts in REBT theory as they are in a better position to give an expert opinion

as compared to using all kinds of psychology professionals. REBT researchers need to take cognizance of this, as it is possible that the use of all kinds of psychology professionals would lead to ineffective and null findings capable of misleading REBT practitioners.

Furthermore, the study adopted a unified form of classifying the REBT therapists in the two settings of the study rather than describing them separately as may have been expected, i.e., clinical psychologists and/or school counselors, amongst others. The umbrella term "REBT therapists" have been used to describe therapists in both hospital and educational settings but some may argue that such a conceptual approach does not apply to both. Yet it should be noted that irrespective of occupational setting, as long as the therapist renders counseling psychological services to people in accordance with the REBT approach, he/she could be generally referred to as a REBT counselor. Although we acknowledge that just as distinguishing features could be in terms of: theoretical orientation (e.g., REBT counselor, psychodynamic counselor, gestalt counselor), others may be based on type of training and certification (e.g., clinical mental health counselor, family counselor, career counselor) and even religious values and beliefs (e.g., Christian counselor, Muslim counselor, Buddhist therapist). In spite of any such classifications, they are all counselor-scholars in different work settings, with similar training experience in some respect. Thus, the ranks for the REBT therapists in the medical setting were equated with those in the educational setting to arrive at a uniform ranking of the therapists used in this current study. The implication is that future researchers and therapists can similarly follow such uniform criteria to find out the opinion of REBT therapists in different work settings regarding a prevailing but novel concern they feel it needs a REBT approach to tackle it.

ACKNOWLEDGEMENTS

Researchers would like to thank the REBT therapists whose expert opinion led to the successful completion of this research work in Nigeria. We would also like to thank Professor Paul N Onwuasoanya whose constructive comments helped to improve the manuscript.

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