Cognitive Behavioural Language Therapy For Hate Speech Experience Among Nigerian University Students

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Abstract
Hate speech is a speech or an action that demonizes a group on the basis of their shared attributes such as ethnicity, culture, colour, gender, political inclination, or philosophical persuasions in relation to context. Currently, hateful languages have become a public issue in Nigeria. This study investigated the impact of cognitive behavioural language therapy on online hate speech experience among Nigerian university students. This is randomized control trial design with 110 participants (Treatment group=55participants and waitlisted control group=55participants). The recruited participants in treatment group received cognitive behavioural language therapy programme. The results of the ANCOVA analysis showed that there are positive study outcomes for the participants in the treatment group compared to those in the waitlist control group over the three periods. Additionally, we found a consistently significant impact of cognitive behavioural language therapy on online hate speech experience among Nigerian university students. We, therefore, conclude that cognitive behavioural language therapy is a powerful intervention, able to reduce specific distorted cognitions associated with hate speech experience among Nigerian university students.

Keywords: Cognitive behavioural language therapy; Online hate speech; Nigerian university students.

Introduction
Every speech can translate words into actions. Words are like bullets; when maliciously used, they literally slay the target, leaving in their wake hatred, disdain, animosity and appetite for more destruction. This inflammatory rhetoric is called hate speech — a term first used by Mari Matsuda in her seminal article in 1989, ‘Public Response to Racist Speech: Considering the Victim’s Story’ (Brown, 2017). Hate speech issues are very complex and its definition very problematic. This is because, first, it lies in complex nexus with freedom of expression (Neshkovska & Trajkova, 2014); second, meaning in language use is context dependent (Riquejo, 2007); and third, hate speech maintains its legality in many cases as a subset of free
speech (Ali, 2018). For instance, people are inherently entitled to expressing their opinions regarding all aspects of life but this, often, metamorphose to hate speech. And, contrastively, (hate) speech alone does not indicate impending violence because it is only by analyzing contextual clues that the potential threat of any given speech can be evaluated (Rosenfeld, 2012), and subsequently qualify as hate speech or otherwise. This tension between hate speech and free speech has led scholars like Neshkovska and Trajkova (2014) to attempt refuting any segregation between the two. They promote the maxim that hate speech is free speech as it maximizes the opportunities for individual expressions.

As a highly contested phenomenon, there is no single unanimously accepted definition of what hate speech actually is. However, there is a level of convergence in the views of scholars on the major attributes of hate speech including, but not limited to, any speech, gesture, conduct, writing, or display capable of inciting people to violence (United Nations Committee, 2014). It is the act of assaulting another because of the victim's or another's actual or perceived race, colour, religion, sex, sexual orientation, disability, age, or national origin (Fisch 2002).

Hate speech is “any form of expression through which speakers intend to vilify, humiliate or incite hatred against a group or a class of persons” (Bruke 2017, p. 3); “all communications that insult a racial, ethnic or political group” (Neisser 1994, p.337). A common denominator among the various definitions of hate speech is that it is vilifying and often incisive. We operationalised hate speech here as speech or action that demonizes a group on the basis of their shared attributes such as ethnicity, culture, colour, gender, political inclination, or philosophical persuasions in relation to context.

There are two categories of hate speech in terms of medium of dissemination: the offline and online hate speech. Offline hate speech refers to hate speech that is registered verbally while online hate speech is disseminated through the internet. Online hate speech has been considered more problematic on the grounds that it enjoys anonymity or the perception of invisibility (Ali, 2018) which largely guarantees unaccountability through social media platforms like Twitter, Facebook, YouTube, and many others utilized by various parties from all works of life to launch vicious virtual attacks (Neshkova, & Trajkova, 2014). Given the above concerns, the present study is therefore focusing on the incidence of online hate speech among university students who are both perpetrators and victims. This study aims to 1) evaluate the effect of cognitive behavioural language therapy on online hate speech among university students (Perpetrators), and 2) evaluate the effect of cognitive behavioural language therapy on online hate speech experience among university students (Victims). In this study, we hypothesize that cognitive behavioural language therapy is effective in the reduction of online hate speech among perpetrators. It was also hypothesized that there will be a significant decline in online hate speech experiences by victims in cognitive behavioural language intervention group compared to those in waitlisted group at post-test and follow-up assessment.

**Online hate speech among university students**

These days, there may be no doubt that bullying is not confined to conventional bullying but has extended to the cyberspace with the advent of the Internet and social network platforms. The present-day nomenclature “online hate speech” has turned out to be a brand-new way of harassing others. The prevalence of online bullying or cyberbullying and online hateful
languages among young people, especially education college students is currently worrisome
and has given researchers across the globe critical concerns because of dysfunctional and
psychological effect on online media users (Foody, Samara & Carlbring, 2015).

Hate speech has a bi-directional effect, and the victims are the targets of hate speech
and the peddlers of hate speech. The targets of hate speech are exposed to violence and
genocidal acts (Burke, 2017) but peddlers of hate speech are victims of cognitive disorder
which does not allow for independent judgement. The latter category of victims of hate speech
constitutes the focus of this paper. This category of victims perceives, evaluates, and passes
judgement on people in line with how they (the people) have been framed or stereotyped. In
Nigeria, for example, the age long division among many tribes, classes and religions has
created many frames, stereotypes, and labels of the participants and these have constantly
played up in every situation, be it political, religious, and otherwise. David, Ştefan, and
Terracciano (2018) stated that distorted communication about a person or ethnic group may be
due to dysfunctional beliefs. It is possible that the person who shares the hate speech-associated
information online is influenced by irrational beliefs. David, Ştefan, and Terracciano (2018),
therefore, proposed that cognitive behavioural therapists could alter or change the irrational
cognitions conceived by people against another because of their culture, colour, gender,
religion, political affiliation using cognitive skills, behavioural and emotional techniques.
These skills and techniques are cognitive and behaviourally driven.

Cognitive behavioural therapy
Cognitive behavioural therapy developed by Beck (1995) suggests that the interpretation of an
event is dependent on cognitive process and response. The cognitive interpretation of life event
is associated with hostility, hate and anger (Beck, 1999). If the cognitive process is aversively
construed as event, the responses are likely to be unhealthy and unfriendly. Then, the person’s
expression may be hostile by making unhealthy speech against another to diminish their social
and political images. Beck (1999) argues that hate speech is the function of dichotomy by which
information is erroneously coded. It is the distorted information that grows into enmity. By
making a wrong judgement, the choice of selecting friends and enemy comes to play. Such
negative cognitive process of communication ignites and fosters genocide and conflict among
people (Beck & Deffenbacher, 2016; David, Ştefan, & Terracciano, 2018). The use of hate
language against a group or a person due to race, colour, religion or sexual orientation triggers
unpleasant emotions in the victim(s) (Schmidt & Wiegand, 2017). Peddlers of the hate
information may or may not know that language regulates emotions (Schmidt & Wiegand,
2017). The researchers, therefore, argue that if cognitive process of information is related to
speech-associated mal-attitudes and dysfunctional emotional reactions, it is possible for
cognitive behavioural therapy (CBT) to achieve online hate speech reduction that is eating deep
into Nigeria university students.

However, considerable evidence has shown that the CBT approach is significantly
effective in helping individuals. The efficacy of cognitive behavioural approaches in mitigating
inappropriate behaviours, automatic thoughts (Klein & Amster, 2003) and unhealthy emotions
(Helgadóttir, et al, 2014) is documented. A study showed that CBT model improves positive
attitudes (Padesky, 2006). To that end, the effectiveness of CBT reduces psychological
disorders like depression, anxiety, stress, distress, among others (e.g. Padesky & Mooney, 2012) as well as modifies desirable behaviours. Previous studies showed that CBT approaches play impactful role towards achieving happiness, resilience and quality attributes. A significant improvement in positive attitudes and pleasant emotional responses was found among participants exposed to 6-weeks of CBT programme (Klein & Amster, 2003). CBT also provides alternative coping strategies for dysfunctional beliefs and emotions (Klein & Amster, 2003). Researchers have called for evidence-based psychotherapeutic intervention for individuals receiving victimization and oppression through language of hate, policies and societal structure (Society for Psychotherapy, 2018). Despite the harmful impacts that online victimization and tribal rejection have been shown to have on student populations who rely heavily on technology, till date it has been ignored in internet research (Schenk & Fremouw, 2012) especially the psychotherapeutic treatment option. We argue that, to date, there is a dearth of psychological treatment intervention for problematic experiences of people who are victims of online hate speech. We are also aware that there are some psychological interventions for cyberbullying, but such studies are limited (Foody, Samara & Carlbring, 2015). In that regard, additional psychological interventions are recommended (Foody, Samara & Carlbring, 2015) and precisely there is no intervention addressing cognitive flaws and dysfunction emotions of online hate speech victims. Given these knowledge gaps, therefore, past literature recommend that there is also a need for intervention that addresses victims of psychological trauma associated with online hate speech (Foody, Samara & Carlbring, 2015).

Methods and Materials

Ethical Considerations and Approval
This study was granted ethics approval by Faculty of Education, university of Nigeria, Nsukka, before the study could commence. A written permission was obtained from students’ accredited advisors, students themselves and their parents/guardians. Additionally, we strictly adhered to the ethical consideration and principles of using human beings for research as stipulated in American Psychological Association (APA, 2013). This study is registered retrospectively in UMIN clinical trial registry with unique number: UMIN000040887.

Participants
The participants were invited via email and phone contacts. A total of 144 students indicated interest and they were screened from March to May 2018 by the researchers. After the screening exercise, 110 university students in Southeast Nigeria were recruited for the study. In order to ensure that the power of the sample size is adequate, we utilized G Power analysis version 3.1.1 (Faul, et al., 2007) to determine if the number of participants is adequate. It was indicated that our proposed sample size of 110 was more than sufficient for the primary goal of this study. Our inclusion criteria included:
1) participant must be a student in any Nigerian university and a Nigerian citizen.
2) they must have a social media account (e.g., Twitter, Facebook, YouTube, WhatsApp).
3) willingness to participate.
4) they must be well-versed in the language of expression, English.
The exclusion criteria were 1) foreign students and 2) internet/social media non-compliance.

Table 1: Demographic Characteristics of the Participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>CBLT Group (n=53)</th>
<th>Waitlist control group (n=54)</th>
<th>Statistic</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>χ²</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>29 (54.73)</td>
<td>28 (52.78)</td>
<td>0.036</td>
<td>0.849</td>
</tr>
<tr>
<td>Female</td>
<td>26 (47.27)</td>
<td>27 (49.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>21.15±3.19</td>
<td>21.55±3.58</td>
<td>-0.617</td>
<td>0.537</td>
</tr>
<tr>
<td>Social Network Site Regularly visit (SNSR)</td>
<td></td>
<td></td>
<td>χ²</td>
<td></td>
</tr>
<tr>
<td>Twitter</td>
<td>5 (9.09)</td>
<td>5 (9.09)</td>
<td>0.747</td>
<td>0.862</td>
</tr>
<tr>
<td>Facebook</td>
<td>18 (32.73)</td>
<td>16 (29.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youtube</td>
<td>7 (12.73)</td>
<td>5 (9.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whatsapp</td>
<td>25 (45.45)</td>
<td>29 (52.73)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td>χ²</td>
<td></td>
</tr>
<tr>
<td>Igbo</td>
<td>17 (32.07)</td>
<td>21 (38.18)</td>
<td>2.845</td>
<td>0.416</td>
</tr>
<tr>
<td>Hausa</td>
<td>4 (7.27)</td>
<td>8 (14.55)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yoruba</td>
<td>15 (27.93)</td>
<td>12 (21.82)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>19 (34.55)</td>
<td>14 (25.45)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td></td>
<td></td>
<td>χ²</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>19 (35.85)</td>
<td>20 (36.36)</td>
<td>1.757</td>
<td>0.780</td>
</tr>
<tr>
<td>Engineering</td>
<td>8 (14.55)</td>
<td>6 (10.91)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Science</td>
<td>12 (21.82)</td>
<td>17 (30.91)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>7 (12.73)</td>
<td>5 (9.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>9 (16.36)</td>
<td>7 (12.73)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td></td>
<td></td>
<td>χ²</td>
<td></td>
</tr>
<tr>
<td>Rejection</td>
<td>16 (29.09)</td>
<td>12 (21.82)</td>
<td>1.127</td>
<td>0.890</td>
</tr>
<tr>
<td>Denial</td>
<td>8 (14.55)</td>
<td>10 (18.18)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hated</td>
<td>14 (25.45)</td>
<td>17 (30.91)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low self-esteem</td>
<td>5 (9.09)</td>
<td>5 (9.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harassment</td>
<td>12 (21.82)</td>
<td>11 (20)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: n= number of participant, %=Percentage, Mean±standard deviation, χ²=Chi-square, t=t-test

Table 1 shows that the mean age of the CBLP group was 21.15±3.19 years, and that of the waitlist control group was 21.55±3.58 years (t=-0.619, P=.537). The CBLP group comprised 29 males (52.73%) and 26 (47.27%) females; the waitlist control group comprised
28 males (50.91%) and 27 (49.09%) females. From the analyses of results, it can be seen that no significant gender difference was observed among the study participants ($\chi^2=0.036$, $P=.849$). In the CBLP group, 5 participants (9.09%) use Twitter, 18 participants (32.73%) use Facebook, 7 participants (12.73%) use YouTube and 25 (45.45%) use WhatsApp. For the participants in the waitlist control group, 5 participants (9.09%) use Twitter, 16 participants (29.09%) use Facebook, 5 participants (9.09%) use YouTube and 29 (52.73%) use WhatsApp ($\chi^2=0.747$, $P=.862$). Regarding ethnicity, in the treatment group, 17 participants (30.91%) were Igbo, 4 (7.27%) were Hausa, 15 (27.27%) were Yoruba and 19 (34.55%) were from other ethnic backgrounds. In the CBLP group, 19 participants (34.55%) were from Faculty of Education, 4 (14.55%) were from Faculty of Engineering, 12 (21.82%) were from Faculty of Social Sciences, 7 (12.73%) were from Faculty of Physical Sciences and 9 (16.36%) were from Biological Sciences. In the waitlist control group, 20 participants (36.36%) were from Faculty of Education, 6 (10.91%) were from Faculty of Engineering, 17 (30.91%) were from Faculty of Social Sciences, 5 (9.09%) were from Faculty of Physical Sciences and 7 (12.73%) were from Biological Sciences ($\chi^2=1.757$, $P=.780$). In the CBLP group, 16 participants (29.09%) experienced rejection, 8 (14.55%) experienced denial, 14 (25.45%) experienced hatred, 5 (9.09%) experienced low self-esteem and 12 (21.82%) experienced harassment. In the waitlist control group, 12 participants (21.82%) experienced rejection, 10 (18.18%) experienced denial, 17 (30.91%) experienced hatred, 5 (9.09%) experienced low self-esteem and 11 (20%) experienced harassment ($\chi^2=1.127$, $P=.890$).

Conditions for an expression to be included as hate speech
1) Endangering national security, 2) violation of public order, 3) impairing human rights, 4) irrational emotion of detestation, 5) expression of inequality, 6) expression of harmful content and tone leading to violence/distress, 7) labelling, and 8) the language of expression being in English and the post made public.

Measures
This study made use of a number of measurement scales. Online Hate Speech Scale (OHSS) developed by the researchers constitutes 21 items that assess the intent and intensity of hate expression/message leading to dehumanization of people, ethnicity, culture, colour, gender, and political inclination using social media platforms. The 21 items in the scale are categorised into two subscales addressing intentions to which online hateful message harms a group/individual and intensity of hate expression/message. During the construction, we took account of classical test-theory for the development of a psychological test (see Jacobs, Völlink, Dehue, & Lechner, 2015):
(1) scale items must be clear, concise, contain one statement, and not ambiguous.
(2) using a criterion of four items per factor, and using the included items twice in the final version.
(3) using at least 10 respondents per item and a minimum of 500 respondents.
(4) need factor analysis determined the factor structure using oblique rotation.
(5) the factor loadings should be at least 0.30 when $N \leq 500$, 0.25 when $N \leq 1000$, and inter-item correlation should lie between 0.20 and 0.40
(6) when the sample is at least 100, test-retest correlation $\leq 0.70$ for a four-week interval, $\leq 0.60$ for a four- to ten-week interval, and $\leq 0.50$ for an interval longer than ten weeks.

(7) concurrent validity $\leq 0.70$ unless scales are of poor quality, and replication through either Exploratory Factor Analysis (EFA) Confirmatory Factor Analysis (CFA) is proven when 90% of items and factor structures hold (given $N \leq 500$).

(8) second-order Factor Analysis (FA) is safely conducted if earlier FA used oblique rotation and scree-tests

(9) tests should consist of 20–50 items. We also subjected the scale into Cronbach alpha coefficient test and its total internal consistency was 0.84. Several studies were reviewed (e.g. Dehue, Bolman, & Völlink, 2008; Jacobs, et al, 2015; Mondal, Silva & Benevenuto, 2017; Sveinbjörnsdóttir & Thorsteinsson, 2008).

Cyberbullying Coping Questionnaire (CCQ) is a 17-item self-report scale that measures different ways of using cognitive, behavioural, and avoidance coping component: 1) mental coping, 2) passive coping, 3) social coping, and 4) confrontational-coping to cope with internet harassment, peer discrimination (Jacobs, Völlink, Dehue & Lechner, 2015). Each item was rated on a 5-point Likert scale (1 = never; 2 = sometimes; 3 = regularly; 4 = often; 5 = almost always). The coefficient value of the four sub-scales (Mental=5items, passive=6items, social=3items and confrontational=3items) showed that CCQ has good internal consistency and acceptable reliability which is between the range of 0.68 to 0.77. The Cronbach alpha coefficient test showed that the scale was valid and maintained good reliability of 0.78 in the Nigerian context.

The Survey for Coping with Rejection Experiences (SCORE) is a 28-item self-report questionnaire that measures coping strategies in response to peer rejection among children (Sandstrom, 2004). The scale focused on acting coping ($\alpha=0.84$) with 11items, aggressive coping ($\alpha=0.80$) with 7 items, denial coping ($\alpha=0.70$) with 5items, and ruminating coping ($\alpha=0.69$) with 5items. A 4-point Likert scale was used to indicate how often they utilized each coping strategy in response to similar experiences, ranging from (1) not at all to (4) a lot. SCORE has been confirmed to be psychometrically adequate to have in terms of qualities (validity, reliability and strong cross-situational consistency in rejection-relevant situations) with alpha coefficient values ranging from 0.69 to 0.84. In order to confirm the cross-situational and national internal consistency, the questionnaire was trial-tested using Nigerian population and we found adequate internal consistency ($\alpha=0.78$).

**Intervention**

Cognitive behavioural language therapy programme (CBLTP) developed by the researchers, is an 8-week programme manual that focused on the steps and activities of therapists, aimed at changing distorted thoughts of victims of online hate speech and replacing it with accurate inferences and implications. CBLTP is a programme that lasted for two months, one session per week. Each therapy session lasted for 45 minutes per week and structured as follows:

Session 1) cognitive alliance and rapport, introduction of participants, establishment of standard of conducts.

Session 2) defining the goals of the programme.
Session 3) automatic detection of hate speech (online specific and general perspectives) and analysing selected previous public published posts on ethnicity, social, religion and political affiliation.
Session 4) the cognitive conceptualisation of online victimisation cum hate speech and behavioural activation of negative inferences made by the victims.
Session 5) altering hate speech-domain specific and general distorted thoughts associated with online communications.
Session 6) reviewing the homework
Session 8) reviewing the previous sessions and feedback and completion of the programme.

Treatment Procedure
Researchers sent invitation letters to five federal universities via students’ unions, to solicit for willing participants who would be part of WhatsApp platform. In the letter, the students were requested to permit the researchers to include their contacts in a WhatsApp group called Cognitive Behavioural Language Therapy Programme. From the phone numbers received, 144 students were originally included as members of the online group. In order to obtain informed consent from the students, we developed and posted a document titled ‘consent agreement form’ in the group. The aim was to obtain approval from the students, but first stating the goals of the programme and the ethical considerations of the study. Of the 144 students, 129 responded to the agreement form. From the competed forms, 110 met the inclusion criteria, but 9 students were foreign students, 6 students declined without any reason and 4 students were not digital complaint, meaning that they did not indicate to having active social media accounts. Thereafter, we delisted the students who did not give approval to participate and those that did not meet the criteria from the online platform. Before the participants were classified into different groups, three annotators generated 8672 micro-charts posted on Facebook and WhatsApp platforms, published by the eligible participants using an annotation manual. The aim was to know if the posts were offensive or not as in a past study (Birkeneder, Mitrovic, Niemeier, Teubert, & Handschuh, 2018). The data was gathered from March to May 2018. The annotators analyzed the semantic and syntactic contents of the published posts by the participants. The annotators are experts in utilizing corpus, a manual annotation with database detecting if a post is hateful or not. They are trained specialists in sentence structure such as syntactic, semantic and pragmatic of online hate speeches. Out of the 8672 chats, 589 comments were found to contain hate speech contents. In addition, we ascertained the baseline data of the problem experienced by the victims (participants) using Online Hate Speech Scale (OHSS), Cyberbullying Coping Questionnaire (CCQ) and Survey for Coping with Rejection Experiences (SCORE).

The eligible participants were allocated to cognitive behavioural language therapy programme (CBLTP) (55=participants) and waitlisted control group (55=participants) using random allocation sequence enhanced by Saghaeri (2014). See Figure 1 for the detail information. The participants in the intervention group received cognitive behavioural language therapy programme packed with how to overcome and challenge abusive speech. Participants in the comparison group received the treatment after the study. During the first and second sessions, the therapists aimed to create positive cognitive alliance and rapport and
familiarized the participants with rules and regulations of therapy session. Session three addressed automatic detection of hate speech (online specific and general perspectives) and analysed selected previous public published posts against ethnicity, social, religion and political affiliation. During session four, automatic inferences leading to cognitive, behavioural and emotional disturbances, which accrued from online hateful speeches were conceptualized and reinterpreted to more accurate perspective. In session five, the focus was on how to alter and discontinue general distorted thoughts associated with online communications. During session six, a review of homework exercises given to participants was conducted. Finally, session eight focused on reviewing the previous sessions and feedback and termination of the programme.

As in earlier trials, the data analysts and the participants were not privileged to take part in the allocation sequence. Thus, the allocation exercise was enhanced using potted opaque envelopes by researchers. At the closure of each evaluation point, the researchers assessed the participants using the measures of investigation. Specifically, participants were assessed at Time 2 (Post-test) between August and September 2018, followed by a Follow-up evaluation, which took place after 3 months, during January 2019.

**Study Design and Data Analysis**

Randomized control trial design was utilized in this study. It is a design that allows three-time points of assessment (Time 1, Time 2 and Time 3) (Lee, et al., 2009). We utilized the Group Randomised Trail design as it enhanced the opportunity to evaluate the impacts of cognitive behavioural language therapy in reducing offensive expressions by allocating the participants into the treatment group put in the same therapy session and waitlist control group (Lee et al. 2009). The data of the pretest, post-test and follow-up were subjected to statistical analysis using SPSS version 22. Specifically, Analysis of covariance (ANCOVA) was used for method of data analysis. ANCOVA was used by the researchers for the following reasons:

1) the participants were completely randomized into treatment and control groups
2) the independent variable with two levels (cognitive behavioural language therapy and waitlisted control groups) were categorical
3) the dependent variables (OHS= Online hate speech, CC= cyber-bullying coping, SCORE=survey for coping with rejection) data were continuous at pre-test, post-test and follow-up stages respectively
4) the Online hate speech, cyber-bullying coping, coping with rejection, and trauma related issues data at pre-test, post-test and follow-up stages were simultaneously analysed
5) Online hate speech, cyber-bullying coping, coping with rejection, and trauma related issues at pre-test and post-test stage did not correlate above $r = .90$ as suggested by Tabachnick and Fidell (2012).
**Results**

**Table 2:** Analysis of Covariance showing the effect of CBLT on Online hate speech in Nigeria as measured by OHSS, CCQ, and SCORE

<table>
<thead>
<tr>
<th>Time</th>
<th>Measures</th>
<th>Group</th>
<th>Mean (SD)</th>
<th>F</th>
<th>p</th>
<th>(\eta_p^2)</th>
<th>(\Delta R^2)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>OHS</td>
<td>CBLP</td>
<td>73.76(4.37)</td>
<td>2.006</td>
<td>0.160</td>
<td>0.019</td>
<td>0.020</td>
<td>73.50-75.01</td>
</tr>
<tr>
<td></td>
<td>WC</td>
<td></td>
<td>74.80(3.65)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Table 2 reveals the study outcomes for the participants in the treatment group compared to the waitlisted control group over the 3 periods. Before the treatment, Table 2 reveals that there was no significant difference between the treatment and control groups in initial online hate speech as measured by OHS, F(1,109) = 2.006, p=.160, \( \eta^2_p =0.019 \), \( \Delta R^2=0.020 \); cyber-bullying coping as measured by CC, F(1,109) = 0.031, p=.861, \( \eta^2_p =0.002 \), \( \Delta R^2=0.015 \); survey for coping with rejection experiences as measured by SCORE, and F(1,109) = 1.639, p=.203, \( \eta^2_p =0.058 \), \( \Delta R^2=-0.012 \). At the post-treatment the effect of CBLT was significant on online hate speech as measured by OHS, CC, and SCORE, F(1,109) = 231.547, p=.001, \( \eta^2_p =0.686 \), \( \Delta R^2=.692 \); F(1,109) = 240.892, p=.001, \( \eta^2_p =0.694 \), \( \Delta R^2=.694 \); and F(1,109) = 92.516, p=.001, \( \eta^2_p =0.466 \), \( \Delta R^2=.473 \) respectively. After the post-treatment, a follow-up result show that the effect of CBLT was significant on online hate speech as measured by OHS, CC, and SCORE F(1,109) = 272.334, p=.001, \( \eta^2_p =0.072 \), \( \Delta R^2=.719 \); F (1,109) = 294.436, p=.001, \( \eta^2_p =0.735 \), \( \Delta R^2=.733 \); and F (1,109) = 133.516, p=.001, \( \eta^2_p =0.557 \), \( \Delta R^2=.575 \) respectively. Furthermore, the (partial eta squared) value of 0.686 at post-test level was indicative that CBLT accounted
for about 68.6% reduction in the participants’ online hate speech. Also, the partial eta squared values of 0.694, 0.466 and 0.741 indicate that CBLT accounted for 69.4%, and 46.6% reduction in the participants’ cyber-bullying coping, and coping with rejection experience in Nigeria respectively.

**Discussion**

The findings showed that the effect of CBLT was significant in reducing online hate speech and the effectiveness was maintained at follow-up. This is an indication that CBLT accounted for a reduction in the participants’ online hate speech. The result also indicated that CBLT accounted for a reduction in the participants’ cyber-bullying coping, coping with rejection experience and trauma related irrational beliefs, respectively. Analysis confirmed that cognitive-behavioural therapy is a treatment-specific approach that is able to change the way people act, think and cope (Association for Behavioural and Cognitive Therapies, ABCT, 2020). It reduces catastrophic feelings and how to accept the sometimes-negative reality of life. Recent studies have also demonstrated the utility of online ACT applications (e.g., Hesser et al., 2014; Ly et al., 2012). ACT includes a set of behavioural principles whereby the client is encouraged to defuse from their psychological content and to engage in values-oriented behaviours (Hayes et al., 2012). Results reveal a significant effect of cognitive self-instruction is effective in decreasing bullying behaviour (Eweniyi, Adeoye, Ayodele & Raheem, 2013).

The results showed that cognitive-behavioural group therapy improves the use of coping strategies by increasing victims’ use of problem-oriented strategies and reducing the use of emotion-focused strategies (Rajabi, et al, 2017). The results of this study correspond with those of Wesner, et al (2014) and Hamdan-Mansour, Puskar and Bandak (2009), concluding that problem-focused strategies are more effective than emotion-focused strategies. In fact, cognitive techniques like changing catastrophic thoughts and dysfunctional beliefs correct distorted interpretations and increase victims’ ability to deal with stressful situations. In addition, behavioural techniques like exposure and role-play change the situations that cause a person to become and stay a victim of bullying. The combination of these techniques facilitates the use of problem-focused coping strategies to create positive emotions in people. The results of this study showed that cognitive–behavioural therapy is effective in reducing internalising symptoms (i.e., anxiety, depression, and physical complaints) in student victims.

When poorly construed feelings and erroneous interpretation of emotional experience is restructured and reframed, there would be more adaptive emotional reactions of stimuli accountable for such poor self-regulation (Gross, 1998). Although it seems uncertain if people’s metacognitive processes can be responsible for dysfunctional emotional experience, and if it does, it is possible that distorted cognitive stimuli could be responsible for that. Along the same line, students could possibly interpret their online experiences negatively, leading to maladaptive behavioural outburst through verbalisation of thoughts and feelings. We have provided a hypothetical case of how victims express anger to exemplify a true picture of cognitive and emotional interpretations of sounds and words among students. “People hate me because of my tribe, race, language, etc. I must change my dress, name, and religion when applying for any position in Nigeria. Considering my identity, I have failed and lost hope in the future. I hate myself and others.” Supporting this, notable evidence maintained that the
psycholinguistic processing of provocative pictures, without thoughtful emotional regulation leads to negative cognitive and emotional responses (Crithchley et al., 2000; Hariri, Bookheimer, & Mazziotta, 2000; Haririet al., 2003; Lieberman, et al., 2007; Liebermanet al., 2005). In as much as the amygdale responses are not adequate, a neural system responsible for regulation of emotion and cognition responses, the likelihood of unrealistic and unhealthy interpretation of online pictures, posts, and chats will be minimized (Haririet al., 2003; Lieberman, Crockett et al., 2007). Given that cognitive factors could be responsible for dysfunctional feelings and behaviours of Nigerian students, our study supports a previous study which recommends interventional approach to alter the cognitive factors using cognitive and behavioural techniques (Jacobs, Völlink, Dehue, & Lechner, 2014).

Our findings support Månsson, et al (2016) who found that cognitive behavioural therapy cushioned the excessiveness of amygdale responses leading to anxiety and other negative emotional characteristics. This illustrates that changes in perception of hateful speech among participants is accounted for by cognitive behavioural language therapy. This suggests that distorted cognitive elements that increase negative reactions can be eliminated using cognitive behavioural approaches (Månsson, et al, 2016).

We argue that the victims of online hate speech experience are also prone or vulnerable to anxiety in terms of securing a job, national appointment, national competitions and national service. We think that the finding of this present study has significantly changed the thinking patterns of the participants, whose fear of getting federal jobs and appointments is associated with online hate speech. Those participants that are anxious about the uncertainty of national opportunities have understood that their anxiety is due to negative thoughts.

Previous studies have shown that words, particularly affective words, can dampen emotional responses (Tabibnia, Lieberman & Craske, 2008). In line with our argument, studies in the past showed that victims of cyberbullying experience a lot of negative consequences, namely anxiety (Campbell, et al, 2012), depression, emotional distress (Perren, Dooley, Shaw, & Cross, 2010; Ybarra & Mitchell, 2004), suicidality (Hinduja & Patchin, 2020; Schneider, O’Donnell, Stueve & Coulter, 2012), social problems (Ševčíková, Šmahel & Otavová, 2012), school violence and delinquency (Hinduja & Patchin, 2007).

The present study aligned with previous cognitive behavioural intervention conducted by Berry and Hunt (2009) which showed a reduction of clinical level of anxiety among adolescents who are victims of bullying acts. The similar findings could be due to adequate implementation of group cognitive behavioural approaches by the therapists in both studies. Although Barry and Hunt’s (2009) study was conducted in 8 weeks, yet it yielded a positive result. However, our findings disagreed with the study conducted by Barry and Hunt (2009) in terms of analysis of data during Time 3 of the intervention. Their study showed no significant change at the follow-up stage but our study observed a positive significant change at Time 3. It is interesting to understand the clinical relevance of cognitive behavioural language therapy in countering the distorted thoughts attributed to online bulling and hateful languages. To this end, this study has provided intervention that can be used to decrease traumatized victims of online hate speech, depressed victims, and anxious students with painful experiences associated with hate speech. These populations with painful online hate speech experiences are vulnerable to psychological and social difficulties such as anxiety, anger and solitude intensely (Atik &
Kemer, 2008), depression and anxiety disorder (Due et al., 2005), and low self-esteem (Fleming & Jacobsen, 2009).

Online psychological therapies have consistently shown that individuals with emotional and behavioural problems gain positive effects when exposed to psychological treatments (e.g., Hedman et al., 2011; Vernmark et al., 2010). Cognitive behavioural therapy is one of the leading treatment modalities in helping both clinical and non-clinical cases mostly associated with the internet (Andersson et al., 2014; Dogöö et al., 2014). The reason is that Internet-based CBT is believed to be cost-effective and a quicker way of reaching populations with psychological problems (Carlbring & Andersson, 2006; Hedman et al., 2011).

Conclusion
This study investigated the impact of cognitive behavioural language therapy on online hate speech experience, and reduction of posttraumatic related stress response among Nigerian university students; it fills a crucial and obvious gap in research around the issue, especially in an African context. We conclude that cognitive behavioural language therapy is significantly impactful in reducing online hate speech experience and posttraumatic related stress response among Nigerian university students.

Funding
This study was fully sponsored by Tertiary Education Trust Fund and Reference Number is TETFUND/DR&D/CE/UNI/NSUKKA/RP/VOL.I

Acknowledgements
The researchers appreciate all the study participants as well as Ngozi Eucharia Ezeh for her role as the corresponding author for this research. Also, we greatly to Tertiary Education Trust Fund who responded positive when we sought their sponsorship.

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