# Systematic Review of Psychotherapeutic Interventions among In-school Adolescents with Psychological Distress

Sylvester Ezechinyere Eze<sup>1</sup>, Susan Olufunmilayo Adeusi<sup>2</sup>, Bolaji Johnson Adesanya<sup>3</sup>, Gboyega Emmanuel Abikoye<sup>4</sup>

<sup>1</sup>Department of Psychology, Covenant University, Nigeria

<sup>2</sup>Department of Psychology, Covenant University Nigeria

<sup>3</sup>Department of Psychology, Lead City University, Nigeria

<sup>4</sup>Department of Psychology, University of Uyo, Nigeria

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Abstract: The aim of study is to provide a systematic review of existing findings of evidence-based interventions on psychological distress among in-school adolescents given the high prevalence of psychological distress among Nigerian adolescent. In this review, studies that focused on cognitive-behavioural therapy (CBT) and psychoeducation (PET) as treatments for psychological distress among the adolescents were searched in the Science Direct, Cochrane, Scopus, PubMed, Psych-Info and Google Scholar databases from time year 2011 to 2022. Within the limited numbers of evidence-based studies in Nigeria, four studies met the inclusion criteria. While two out the four studies adopted brief-CBT, the other two adopted brief-psychoeducation. With treatment effect size (d= .32), after five sessions of each weekly 60minutes, CBT treatment interventions were effective at reducing psychological distress symptoms among adolescents [F(1, 39) = 16.76, p = 0.0001; F(1, 34) = 15.0, p = .0001] given the treatment intervention and control groups pre-test and post-test scores (intervention group scores [pre-test M= 24.30 (SD=6.59) vs. post-test M= 4.60 (SD=7.35); d= 0.32), control group scores [pre-test M= 24.25 (SD=6.06) vs. post-test M= 17.05 (SD=11.17); and intervention scores [pre-test M= 25.3 (SD=8.8) vs. post-test M= 11.8 (SD=9.5), Control group scores [pre-test M= 24.2 (SD=6.1) vs post-test M= 21.1 (SD=7.9)] for the two CBT studies respectively. Psychoeducation was in part not effective at reducing psychological distress symptoms among adolescents [F(1,36) = 1.56, p = 0.22]after three week sessions of 90 minutes with mean difference scores at post-test [treatment group: M=70.92; SD= 43.22) vs control group M=52.00;SD=77.77), p<0.000). The treatment gaps discovered in studies of PET is essentially indicative of further intervention studies in mental health of the adolescents' population; given the sparseness in experts availability that can administered CBT in schools of low-income countries that Nigeria belong.

Keywords: Psychological distress, Depression, Anxiety, Stress, Adolescents, Systematic review, CBT, Psychoeducation.

#### 1. INTRODUCTION

Mental health is an important part of overall health and well-being of every human being including children and adolescents. In every six individual globally, one person is an adolescent between the age of 10 -19 years. It is estimated that in every five adolescents, one experiences mental health condition (UNICEF, 2021; WHO, 2021, 2022). Adolescence is one unique,

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most rapid and formative phase of human development (WHO, 2021). A formative phase characterised with physiological, psychosocial, emotional, cognitive changes and demands. These changes and demands interplay may leave adolescents vulnerable to psychological disorders/distress particularly among in-school adolescents (Shorey et al., 2022). Although, studies have shown that whether an adolescent is in school or out of school similar level of psychological distress prevalence and functional impairment exist in the two groups (Okwaraji et al., 2018; Pengpid & Peltzer, 2020).

Psychological distress is one of the mental health problems defined as a state of emotional suffering characterized by cooccurring depressive and anxiety symptoms with somatic complaints (Gebremedhin et al., 2020), and depression has been
reported to be common mental health concerns among adolescents (WHO, 2021), with global point prevalence of 34 (Shorey
et al., 2022). Depression alone accounts for 13% of the global burden of disease in this age group (Gebremedhin et al.,
2020; Méndez et al., 2021). Specifically, clinical and epidemiological studies show that 40–80% of children and adolescents
with depression have at least one other disorder, and 20–50% have two or more comorbid disorders (Méndez et al., 2021;
Ghandour et al., 2019; Polanczyk et al., 2015; UNICEF, 2021). Worldwide, mental health problems account for 13% of the
total burden of disease, and 31% of all years lived with disability (UNICEF, 2021). For most mental health disorders, their
first onset occurs in childhood or adolescence with severe mental disorder typically preceded by less severe events, thus
leading to failure to detect and treat for years (Erskine et al., 2017; Polanczyk et al., 2015). About 50% of this population
experienced onset of corresponding symptoms of mental health problems around age 14 (Kessler et al., 2007).

Preponderance of psychological distress has been reported from different countries. For example, in United States, a lifetime and annual prevalence among adolescents is 11% - 7.5% (Méndez et al., 2021). Likewise in the Europe, adolescents' psychological distress rate lies in the range from 7.1% to 19.4% (Méndez et al., 2021; Gebremedhin et al., 2020). Also, in Australia prevalence of 7.7% psychological distress was found in the previous twelve months (Méndez et al., 2021). Similarly, in Asia a prevalence range of 18% - 64% psychological distress was found among adolescents between the ages of 10-19 years (Lee et al., 2017; Mridha et al., 2021; Saiful et al., 2021; Shorey et al., 2022). In comparison, among Africa countries, 34.9% of psychological distress of probable depression and anxiety was found in Ethiopia secondary school adolescents (Gebremedhin et al., 2020). Also, psychological distress among a national sample of in-school adolescents in Morocco was 23.3% (Pengpid & Peltzer, 2020). In addition, among Uganda adolescents, 57% prevalence of psychological distress was found (Anyanwu, 2021; Nabunya et al., 2020). In Nigeria, prevalence range of 15% - 50% psychological distress has been reported in the literature among in-school and out of school adolescents between the ages of 10 - 19 years (Akanni & Otakpor, 2016; Taiwo, 2011; Oderinde et al., 2018; Okwaraji et al., 2018). Largely, prevalence rate of psychological distress among secondary school adolescents in Nigeria ranges between 15-50% and within the global rate of 7.1% to 64% (Méndez et al., 2021) for which urgent psychological treatment intervention attention is required. Undoubtedly, the inherent risks, impairing and disabling consequences of untreated psychological distress among adolescents are not limited to adolescence as a stage in development but extend to limiting an average vulnerable adolescent' mental wellbeing and opportunities to lead fulfilling lives in later adulthood (Clayborne et al., 2019). In different prevalence studies reviewed urgent need for effective treatment interventions have been recommended as measures to reducing psychological distress such as depression, anxiety and stress among adolescents.

Treatment interventions such as cognitive behaviour therapy and psychoeducation have been reported in literature as effective treatment measures to treating psychological distress, depression, anxiety and stress disorders (Méndez et al., 2021; Ghandour et al., 2019; Hayes et al., 2010; Jibunoh & Ani, 2022). Studies have shown that cognitive behaviour therapy (CBT) is effective treatment intervention for psychological distress such as depression, anxiety and stress (Amoke et al., 2020; Are et al., 2021; Creswell et al., 2020; Bella-Awusah et al., 2016). In addition, a statistically significant beneficial effect of CBT interventions was found in systematic review studies on CBT treatment intervention efficacy as a preventive intervention on depression in children and adolescents targets as control groups after being identified or diagnosed of having moderate or severe levels of depressive symptoms (Hetrick et al., 2016). Despite the established efficacy and effectiveness of psychological intervention (e.g cognitive-behavioural therapy) as the first line of treatment option as well as preventive treatment intervention for psychological distressed adolescents in literature (Creswell et al., 2020; Hetrick et al., 2016; Oud et al., 2019; Purgato et al., 2018; Watkins, 2017) there exist very limited studies showing the effectiveness of CBT in treating psychological distress among secondary school adolescents in Nigeria as well as very limited access to the treatment in secondary schools in Nigeria (Jibunoh & Ani, 2022). This may be due to lack of professionals with the expertise to deliver the intervention in schools as CBT is a highly skilled demanding intensive treatment measure that requires highly

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trained skilled professionals with a lengthy 12–20 treatment sessions and intensively expensive (Alonso et al., 2018). Considering the well-established existing high prevalence, inherent negative consequences and the huge treatment gaps necessitated by lack of trained personnel, lengthiness of sessions, its expensive and intensive forms, as well as CBT limitedness availability and accessibility alternative treatment intervention such as psychoeducation has been suggested by researchers as a treatment intervention for adolescents' psychological distress, depression, anxiety and stress disorder to reducing the existing elevated prevalence particularly in low income countries such as Nigeria where there are limited access to CBT due to limited resource availability including skilled personnel (Bevan Jones et al., 2018; Donker et al., 2009; Jibunoh & Ani, 2022).

Psychoeducation a form of treatment intervention which provides knowledge and awareness about mental illness condition including illness-health behaviour literacy, knowledge or awareness in treatment provision identified as a low intensity intervention, less expensive, and a more easily to administer intervention which should be adopted where CBT is not available (Donker et al., 2009) have been reported in literature to be effective in treatment intervention at reducing adolescents psychological distress, depressive and anxiety symptoms (Creswell et al., 2020; Donker et al., 2009). Similarly, studies have shown that illness-health, behaviour literacy, knowledge or awareness in treatment provision of mental conditions were effective at reducing adolescents mental condition, depression (Bevan Jones et al., 2018; Muriungi & Ndetei, 2013). While in the developed countries, for instance in US, there exist among secondary school adolescents access to cognitive behaviour therapy treatment interventions (Creswell et al, 2020; Alonso et al., 2018) as well as psychoeducation literacy programmes on psychological distress (depression, anxiety and stress) awareness, knowledge or literacy based programmes (TADS, 2009). There is not known CBT accessibility treatment programmes as well as psychological distress psychoeducation or knowledge base treatment intervention programmes existence among adolescents in secondary schools in Nigeria (Jibunoh & Ani, 2021), particularly with one in every Nigerian being an adolescents (PMA2020/Nigeria), and three in every ten Nigerian adolescents between the ages of 10-19 years suffering from psychological distress of probable depression and anxiety (Akanni et al., 2016; Oderinde et al., 2018). However, studies have shown that psychoeducation is equally an effective treatment therapy for adolescents' psychological distress, depression, anxiety and stress (Bevan Jones et al., 2018; Donker et al., 2009; Muriungi & Ndetei, 2013). For example, students with psychological distress were found to have reduced symptoms after participation in brief psycho-educational interventions (Simon Bisji et al., 2019; Donker et al., 2009). Likewise, psychoeducation have been found as effective treatment as a mental illness knowledge or awareness based intervention for schizophrenic patients by improving self-seeking behaviour as we as reducing psychological distress, risky sexual behaviour, and enhancing self-disclosure associated with an HIV diagnosis among none adolescents populations in Nigeria (Benjamin, 2006; Akinniyi et al., 2021).

# Statement of Problem

Experiencing psychological distress by adolescence can disrupt important developmental processes, which can have longstanding effects on socio-demographic status and support relationships (Clayborne et al., 2018). For example, living with mental health problems at early stage of life have been implicated as potential factor in disruption of education and early career development of affected individuals (Kessler et al., 2007). Globally, reports have shown an increase in preponderance of mental health problems among children and adolescents with obvious impairment in functioning and wellbeing (Erskine et al., 2017; Polanczyk et al., 2015). The situation is not different in Nigeria as reported by various studies reveals that 3 out of 10 adolescents attending secondary schools in Nigeria suffer from psychological distress of probable depression, anxiety and/or stress. Unfortunately, majority of this population are not receiving the specialized treatment they needed (WHO, 2021; UNICEF, 2021; Shorey et al., 2022). In addition, this situation is worse by the fact that there is dearth of psychological intervention studies on this issue in Nigeria. This study is therefore concerned with reviewing existing literature on randomised controlled trial studies that reported efficacy of psychotherapeutic interventions among psychologically distressed in-school adolescents in Nigeria.

#### **Research Questions**

- 1. In comparison, what would be treatment outcome between psychoeducation type intervention and CBT on psychological distress among in-school adolescents?
- 2. In what ways will number of treatment sessions matter in the outcome effect of CBT and psychoeducation among inschool adolescents with psychological distress?

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3. To what extent the interventions (psychoeducation and CBT) sustained treatment effect size at post treatment intervention as a mono therapy?

#### **Research Objectives**

- 1. To find out the effect of psychoeducation as a treatment condition among in-school adolescents with psychological distress.
- 2. To examine treatment effect of CBT among in-school adolescents with psychological distress.
- 3. To assess the outcome of CBT or psychoeducation is better determined by the length of sessions.
- 4. To ascertain the treatment effect size of psychoeducation sustained at post treatment intervention either at short-term or long-term

#### 2. METHODS

A systematic review of journals, articles that have focus on effectiveness of CBT and psychoeducation as preventive and treatment interventions at reducing psychological distress, depression, anxiety and stress among secondary school adolescents population in the Science Direct, Cochrane, Scopus, PubMed and Google Scholar databases were searched from year 2010 up to 2021. To identify the studies of interest the search terms psychological distress, adolescent mental health problem, distress, anxiety, depression, psychoeducation, CBT, CBT efficacy, effectiveness and all the possible combinations of these keywords were used.

#### **Inclusion criteria**

The inclusion of studies in this systematic review is:

- 1. Randomized Controlled Trials with control group
- 2. Study with full access text
- 3. Studies with treatment outcome, and after effect of treatment
- 4. Studies reported in English language.
- 5. Studies on in-school adolescents in Nigeria.

#### **Exclusion criteria**

The criteria for excluding a study were

- 1. Unrelated and studies beyond the variable of interest.
- 2. Meta-analysis
- 3. Commentaries
- 4. Studies that were found in duplicate sources searched

#### Study selection

The application of the set out inclusion and exclusion criteria was used to search for studies of interest in the Science Direct, Cochrane, Scopus, PubMed, and Google Scholar databases. The searched terms include psychological distress, adolescent mental health problems, distress, anxiety, depression, stress symptoms, prevalence, CBT, psychoeducation, efficacy, effectiveness and all the possible combinations of these keywords. The duplicate articles that were repeatedly found in various databases were removed.

#### **Data Extraction and Synthesis**

A total of 2193 studies were found using the search terms from different search engines. Among the studies, 2186 were excluded since they could not meet up the inclusion criteria and using the exclusion criteria set. Only 07 studies were used for the systematic review as seen in the PRISMA 2020 flow diagram below:

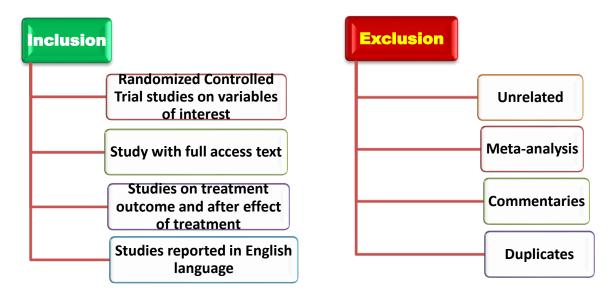


Figure 1: Showing Inclusion and Exclusion Criteria

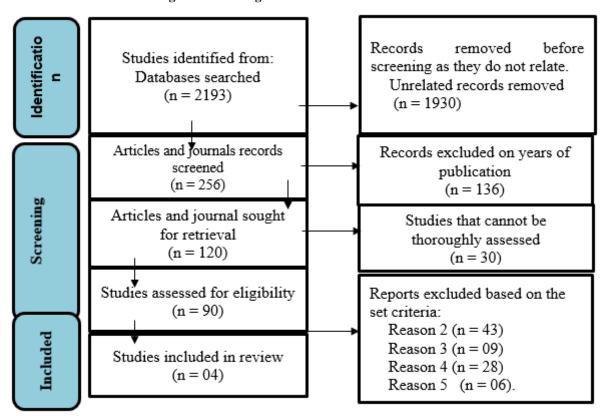


Figure 2: Showing stages of databases searched from 2011-2022

**Table 1: Summary of Included Studies** 

Author	Purpose	Design	Treatment	Sample and	Assessment	Findings/Results
			used	Sample	instruments	
				Characteristics		
Jibunoh	The study	Randomised	Psycho-	40 students selected	Data was	The intervention
& Ani	evaluated if	Control	education.	from 2 schools.	obtained	group's post-test
(2022)	psycho-	Trial	3 sessions of	Randomly assigned	using the	scores were similar to
	education can	(experiment	90minutes	into	Spence	the (waiting-list)
	significantly	al design)	with break.	20 participants	Children's	control groups.
	reduce anxiety			(each for	Anxiety	

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	symptoms among Nigerian adolescents			Intervention and Control group). Aged 13–16 years (12 male and 28 female.	Scale (SCAS).	[F(1,36) = 1.56, p = 0.22]
Bisji et al., (2019)	Psychoeducation effectiveness (PE) on psychological wellbeing	Randomised Control Trial	Psychoeducation (PE) 4 sessions of 1 hour each session.	48 adolescents selected from 2 schools divided into two groups of 24 participants each in experimental and control group.  Aged 14-20 years.  Participants were 24 males and 24 were females.	The Mental Health Continuum- Short Form (MHC-SF)	Treatment was reported effective as Treatment group scored higher than the control group on psychological wellbeing at post-test. Treatment: (70.92{SD 43.22}, Control: (52.00{SD 77.77}), p<0.000).
Are et al., (2021)	Effectiveness of teacher-delivered Cognitive Behavioural Therapy (CBT) for adolescents with clinically diagnosed depressive disorder	Controlled clinical trial experiment	Cognitive Behavioural Therapy (CBT). 5 sessions of 1 hour each	40 adolescents (aged 13–18 years) recruited from two schools (20 from each school) randomised into control and treatment groups.	Beck Depression Inventory (BDI)	Treatment was reported as effective: The intervention group had significantly lower post-intervention depressive symptoms [Means 4.60 vs 17.05; t = 4.13; p = 0.0001, F (1, 39) = 16.76, p = 0.0001] Effect Size (Cohen's d) = 1.3. Intervention group pre-test and post-test intervention scores [M= 24.30 (6.59); vs M= 4.60 (7.35]. Effect 0.32. Control group pre-test and post-test scores 24.25 (6.06) vs 17.05 (11.17)
Bella- Awusah, et al., (2016)	Effectiveness of brief school- based, group cognitive behavioural therapy for depressed adolescents	RCT	Cognitive Behaviour Therapy. 5 sessions of 45-60 minutes each.	40 In-adolescents aged 14–17 years. 20 in each group (Treatment and Control)	Beck Depression Inventory (BDI)	Intervention group maintained the treatment effect with significantly lower depression scores and 16 at weeks post intervention.  Treatment group: Mean scores baseline and post intervention [25.3 (8.8); 11.8 (9.5)]. Control group: Mean scores baseline and post intervention [24.2 (6.1); 21.1 (7.9)].  F(1, 34) = 15.0, p = .0001

# 3. RESULT

The aim of this study is to analyse the existing research works and findings in relation to the effectiveness of CBT and psychoeducation as treatment interventions of psychological distress among psychological distressed secondary school adolescents through the posed research objectives and questions as follow:

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The research question one states that what is the effect of psychoeducation treatment condition among psychologically distressed adolescents?

 Studies
 Treat Group
 Control Group

 Pre-test
 Post-test
 Pre-test
 Post -test

 Jibunoh & Ani (2022)
 59.9
 56
 59.16
 48.95

 Bisji et al., 2019
 70.92
 52

**Table 2: Pre and Post-Intervention Test Scores** 

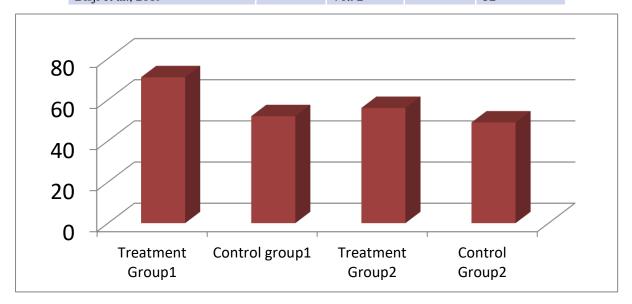


Figure 2: Post treatment Test Scores

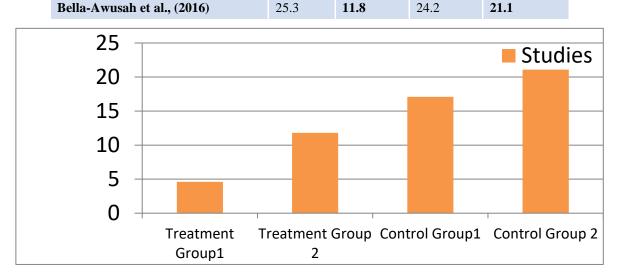
The research question two states that what is the treatment effect of CBT among psychologically distressed secondary school adolescents?

 Treatment Group
 Control Group

 Pre-test
 Post-test
 Pre-test
 Post-test

 Are et al., (2021)
 24.3
 4.6
 24.25
 17.05

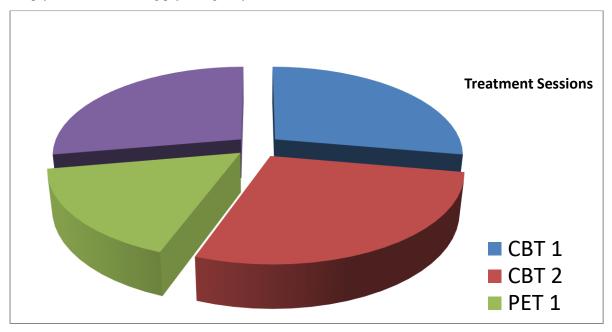
Table 3: Pre-tests and Post- treatment tests Mean Scores



**Figure 3: Post treatment Test Scores** 

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The research question three states that to what extent do the number of treatment sessions determine the outcome effect of CBT and psychoeducation among psychologically distressed adolescents?



**Figure 4: Number of Treatment Session** 

Research question four states that to what extent does the psychoeducation show sustained treatment effect size at post treatment intervention as a mono therapy?

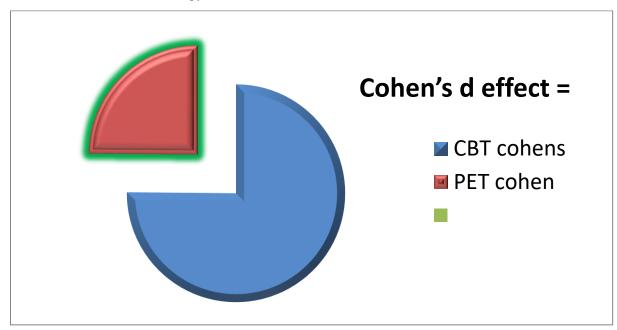


Figure 5: Post-Treatment effect sizes

# 4. DISCUSSION

Using PET treatment intervention there was decrease in the level of psychological distress among secondary school adolescents following the administration of psychoeducation after five treatment session with the treatment group when compared with the control group (see table 2 & figure 2). The observed measure of symptoms recorded at base line and post-treatment test for both the treatment and control group is indicative of effectiveness of PET intervention.

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Also, CBT intervention had a therapeutic effectiveness on psychological distress symptoms reduction among psychologically distressed secondary school adolescents (see table 3 & figure 3). In addition, CBT and PET had treatment intervention gains recorded with an average of five treatment sessions. This is indicative that among psychologically distressed adolescents brief group therapeutic session of at least five sessions using either PET or CBT would effectively reduce distress symptoms.

Likewise, the treatment effect size and sustained post-treatment intervention effect for CBT makes most appropriate for the treatment of psychological distress among secondary school adolescents especially where there are experts' availability with the expertise to administer cognitive behaviour therapy. Given the none-availability of professionals that can administer the Cognitive behaviour therapy, psychoeducation remains an effective treatment option that can be employed (see figure 4).

However, the use of PET shorter than sessions may give poor treatment effect, thus making not an effective treatment intervention. Also, the none-availability of sustained treatment effect of psychoeducation at post-treatment test for either short-term or long-term creates a platform for further research by clinicians in the field (see figure 5). Consequently, PET intervention is an effective stand-alone treatment intervention among psychologically distressed secondary school adolescent and may be beneficial for the adolescents with psychological distress considering the sparseness in availability of CBT experts that can deliver intervention in secondary schools in Nigeria.

#### 5. CONCLUSION

This study showed that PET was effective as other intervention, CBT in reducing psychological distress symptoms among secondary school distressed adolescents. Also, the study provides clear insights of an alternative preventive and treatment intervention for students with different levels of psychological distress other than usual CBT. In addition, psychologically distressed adolescents can benefit from both group brief cognitive behaviour (bCBT) therapy as well as psychoeducation (GPET) treatment intervention programmes. The practice of PET intervention widely in schools can reduce the mental health burden among the population, create much needed illness knowledge, treatment access and facilitate help seeking behaviour. Hence, PET being knowledge and awareness based, less intensive, expensive and skills demanding treatment can be considered by none-clinicians while CBT a more intensive and skill demanding treatment intervention like bCBT can be utilized by trained clinicians (experts) in schools.

#### **GAPS**

Most of the studies reviewed did not report at follow up period's treatment effect size. Also, PET studies reviewed did not report follow up post-treatment sustained effects whether at short-term or long-term.

# 6. RECOMMENDATION

Studies of PET intervention with follow up treatment effect evaluation at post-treatment intervention should be encouraged.

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