EFFECTS OF PSYCHOLOGICAL THERAPIES ON MATHEMATICS SELF-CONCEPT, ACHIEVEMENT AND CAREER ASPIRATION OF STUDENTS ASSOCIATED WITH BIG-FISH-LITTLE-POND IN JUNIOR SECONDARY SCHOOLS IN OYO STATE

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ABSTRACT

Students known as Big-Fish-Little-Pond (BFLP) are those with higher achievement scores in primary schools which decreases overtime in highly competitive secondary schools. The BFLP overtime decline performance has been shown to result into low students' motivation, self-concept and career aspiration; thus becoming a major concern to parents and policy makers. Previous intervention studies have focused more on regular students than on the BFLP students. This study, therefore, was designed to determine the effects of psychological therapies (Cognitive Behavioural Group Therapy- CBGT and Solution Focused Brief Therapy- SFBT) on mathematics self-concept, achievement and career aspiration of BFLP students in Oyo State, Nigeria. Moderation effects of Socio-economic Background (SeB) and motivation were also examined.

Festinger Theory served as framework, while the pretest-posttest control group quasi experimental design using 3x2x2 factorial matrix was adopted. Simple random sampling technique was used to select two senatorial districts and two Local Government Areas (LGAs) from each senatorial district. Three schools which had between eight and 12 students or more scoring less than five deviation in the two mathematics self-concept tests, students' mathematics achievement test and their common entrance records were randomly selected from each LGA. In each adopted school, minimum of eight or / and maximum of 12 students were randomly selected and assigned to CBGT (40), SFBT (45) and control CAU (41),while treatment lasted eight weeks. Instruments used were Mathematics Achievement Test (r=0.68); Parental SeB; Score Record Template and Mathematics Self-concept (r=0.94), Students' Motivation (r=0.92) and Student Career Aspiration (r=0.88) scales.Data were analysed using ANCOVA at 0.05 level of significance.

There were significant main effects of treatment on students' mathematics self-concept ($F_{(2,113)}$=230.56; η^2=0.80), students' mathematics achievement ($F_{(2,113)}$=31.47; η^2=0.36) and students' career aspiration ($F_{(2,113)}$=11.97; η^2=0.18). Participants in SFBT group had the highest mathematics self-concept mean score (49.37), followed by CBGT (47.54) and CAU (30.58) groups. Participants in SFBT obtained the highest mean score in students' mathematics achievement (11.74), followed by CBGT (6.27) and CAU (6.01) groups. Students in SFBT had the highest career aspiration mean score (47.56), followed by CAU (46.97) and CBGT (44.23) groups. There was no significant main effect of SeB on students' mathematics self-concept, achievement and career aspiration, while motivation had a significant main effect on students' mathematic achievement ($F_{(1,113)}$=4.44; η^2=0.04). Students who were highly motivated obtained the higher mean score (8.75) than their counterparts who were not motivated (7.27). Motivation had a significant main effect on career aspiration ($F_{(1,113)}$=44.82; η^2=0.29) in favour of highly motivated students (48.03) than those that were not motivated (44.48), but not significant on students' mathematics self-concept. The two-way and three-way interaction effects were not significant.

Solution focused brief and cognitive behavioural group therapies improved mathematics self-concept, achievement and career aspiration of junior secondary students associated with Big-Fish-Little-Pond in Oyo State, Nigeria. These therapies should be adopted to improve Big-Fish-Little-Pond learning outcomes.

Keywords: Big-Fish-Little-Pond effect, Mathematics achievement, Career aspiration of Junior Secondary School students

Word count: 466

CERTIFICATION

I certify that this study was carried out by Adesewa Taiwo YUSUF in the

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"Regardless of how it goes, the lord is good! Alhamudullilahi Robil Al-ameen"

DEDICATION

This thesis is dedicated to:

The sake of Allah, my Creator and my Master,

My great teacher and messenger, Mohammed (May Allah bless

and grant him), who taught us the purpose of life;

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1.1 Background to the Problem

Mathematics is a branch of science that investigates essential ideas of numbers, space and makes use of these ideas in the field of science and engineering. Mathematical research exhibits the connection between different controls of hypothetical and applied Mathematics. It likewise joins the idea of insights, computational science, cryptology, econometrics and theoretical physical science. According to (Franklin, 2016), Mathematics can likewise be connected in an expansive range of fields going from farming industry, meteorology and zoology.

Applied mathematics underpins almost every part of human lives. Without applied mathematics, there would be no computer programmes. When individuals are more numerical in their approach, they will be more effective. Mathematics is an ability which must be obligatorily improved by all in each stroll of life. Mathematics is one of the most significant subjects no matter to which field or profession one belongs. This is the reason why students should take the subject seriously and have its full understanding. Though the basics of mathematics start from elementary school but its usage continues till the students become adults and thus it can be said that mathematics has become an integral part of their lives, without it, is like a ship without a sailor (Gerg, 2016).

Mathematics is a systematic presentation of concern (Nellore, 2015). Norris (2012) believed that if riddles and competition can be added to mathematics curriculum this will make the subject more interesting to the students. Mathematics' riddles and questions inspire and draw an alert and candid minded way of behaving among adolescents and enable them to create clearness in their reasoning.

The importance of mathematics and the role it plays in individual and the society in general prompted the researcher to know why some students don't perform very well in mathematics in all levels of education, mostly at the secondary school level and how their self-concept in mathematics can be increased so as to improve their achievement in mathematics as well as to promote their career aspiration in mathematics.

Various teachers and parents believe that there are academic profits related with going to schools of high standard mostly a school with high level of competition (for instance assessed by government state administered tests). Though, vital proof demonstrates that students selected in these highly competitive schools don't perform very well to the

expectation of their parents, guardians, and teachers and even to the society in general unlike their mates who go to schools with less competition. Students from these low competition schools perform averagely okay (Marsh, 2005; Marsh and Craven, 2002; Marsh and Hau, 2003). Students at any particular point of academic capacity accomplished a lesser score in a school with high standard or high competition which, in order, was related with lesser career aspirations (Davis, 1966). Davis (1966) evaluated the profession choices of students going to universities of various educational guidelines. He established that students who have potentials use to have greater career aspirations if decent marks or scores were effortlessly acquired in their different schools contrasted with similarly capable students who went to universities where decent grades were harder to get.

It has been assumed that when students get good marks in school, they tend to have high career aspirations and career development in that subject (Fouad, 2007). High performing students who attend academically selective schools expressed poorer career objective compared to students who attend academically non-selective schools. According to Betz and Hackett (1981), getting higher marks in school subjects like mathematics have been observed to be a vital indicator for career choices at the individual level. Marsh (1991) demonstrates that school-average achievement adversely impacted profession ambitions after guiding for individual achievement as well as individual differences (temperament, intelligence, attitudes, and abilities). Studies have shown that students' high performance in school is fundamentally associated with their futureobjectives (Ahmavaara and Houston, 2007).

Students' performance in mathematics may declines with difficulty level when they get to secondary school. Students' self-assessment for mathematics capability may weakened during this time as well (Abarbanel, 2008). According to Mattawa (2013), some issues have been adduced for the low performance of students in mathematics at all levels of education, chiefly at secondary school level. These include, low academic self-concept (Quigley, Marshall, Deaton, Cook, Padilla2011), academically selective schools and academically non-selective schools, low class average or low school average, family socio-economic status, motivation, gender relationship, anxiety (Ubando and Melissa, 2016), and self-confidence, lack of capable mathematics teachers, (Hansen, Mavrikis and Geraniou, 2016), tools and educating resources for successful education, students' career aspiration, students' self-regulation learning, level of students' anxiety and other literacy factors that may influence comprehension of mathematics test. However, no clear cut reasons on why students'

performance, students' career aspiration and self-concepts in mathematics, on the average, decline when they transit from primary schools to secondary schools.

When students move to a more academically challenging school, whether it is by choice or because of external conditions beyond their control, there is a significant negative impact on their academic performance (Brunner, Keller, Hornung, Reichert, and Martin, 2009; Marsh, Koller, and Baumert, 2001). When a student moves into a new school, there is the possibility that this new environment was "imposed" upon them, resulting in a feeling of lack of control for the student (Bandura 1989). As a result of this, students may "select" to act in either a negative or positive way. By reacting negatively, there is evidence to suggest that this transition into a new school will have negative impact on his or her achievement in school subjects like mathematics (Cole, 2001, as cited in Marsh and O'Mara, 2008).

As students move from one educational environment, which is less competitive than the school environment where they move into, it will cause discomfort to students as they adapt to the new, probably more homogeneous setting (Marsh 1987). As students enrol in schools with a selective admissions process, they may be leaving a previous learning environment where they are recognised as the top-performing students. Upon entering the more competitive and selective school setting of an independent school, they might suffer from Big Fish Little Pond Effect (BFLPE) because " possibly exceptional learners can be disheartened by no more being a "big fish" within a new, highly selective setting, in comparison with others of equal ability" (Marsh, Koller and Baumert, 2001).

Why does a student who has been very brilliant in primary school turned into a normal or even beneath normal student after he/she goes to highly competitive schools (academically selective school)? This is a subject that BFLPE studies have not been actually paid attention to. Is it the environment of the school? Is it the responsibility of the student? Is he or she actually keen on the subject being well thought-of? What is his or her state of mind to the subject being considered? The Big-fish-little-pond Effect (BFLPE) was proposed by Marsh (1984). It was proposed to sum up the impact peer groups otherwise known as frame of reference placed in social comparison theory. The theory on the BFLPE theorises that students contrast their academic standard with those of others in their classes or schools and use this comparison to mould up their own educational standard simply called academic self-concept. Though the BFLPE is precise to academic self-concept, Big fish in a little pond can simply be explained as a situation in which if a moderately big fish swims in a little pond where there are comparatively smaller fishes, it will be seen more noticeably than when it swims in a big river where there are big fishes.

As indicated by the hypothetical model supporting the BFLPE, individual capacity is confidently identified with academic self-concept ("when I am performing very well in class mostly than most of my classmates I am proud of myself particularly about my capacities), but the normal capacity of the class is adversely identified with academic self- concept ("when other students in my class are extremely brilliant, I am not splendid about them). This unfavourably comparison with the classmates is what brings up the issue of BFLPE. Be that as it may, for those students who do go to academically non-selective schools referring to as the low competitive schools, they stay unaffected 'they still remain as Big Fish in little pond because the academic level in the non-competitive schools are still the same as their previous schools.

The Research indication on BFLPE is substantial. It has been revealed to be at differently stages of education, there are harmful influences on educational consequences (for example, score point average, educational, occupational and career advances) and the probability of taking advanced English and mathematics). Seaton (2009)

The BFLPE model was exactly intended to comprehend the growth of academic self-concept in schools (Marsh 1984). The BFLPE defines that comparatively competent students' academic self-concept decrease while going to highly competitive schools unlike while going to schools wherever the capacity level of scholars is low. It is this undesirable result of school-average accomplishment on people's self-concept that describes the BFLPE. With this hypothetical model underlying the BFLPE, Marsh (1984) theorises that students contrast their individual academic capacity with the academic capacities of their companions and utilize this social comparison idea as one reason for framing their own academic self-concept. An awful BFLPE happens where similarly capable students have lower academic self-concepts when they contrast themselves with other clever students and higher academic self-concepts when they contrast themselves with fewer bright students.

Big-Fish-Little-Pond Effect is the negative impact on the academic accomplishment of a student resulting in transitioning to a more academically rigorous setting (Marsh, 1987). When a student transits from primary school to secondary school, how well his academic and social needs are met will determine whether it is a positive or negative experience (Cauley and Jovanovich, 2006). It can be negative if the student is not able to accurately assess his ability to be successful, in something that came more easily to him while in the lower school (Rudolph, Lambert, Clark, and Kurlakowsky, 2001). In addition, if he struggles academically, there is a possibility that he could become depressed and withdrawn, negatively impacting his

confidence to perform well in mathematics. It can be assumed that the impacts of individual and school-average achievement on career aspirations can be interceded by BFLPE.

The self-concept of students, mostly academic self-concept, is an essential concept that teachers and investigators ought to comprehend, because of the manners by which it affects students' achievement and future objectives. In general terms, self-concept is distinct as the approach an individual aim, views and assesses him or herself with respect to how capable he/she is in school subjects. A few investigations have been conducted on the association linking self-concept and academic accomplishment of students in school subjects such as mathematics (Adegoke, 2015; Yara, 2010; Marsh, 2003) and English Language (Noels, Clement and Pelletier, 2001).

Students with great as well as optimistic self-concept will possibly perform acceptably in Mathematics. On this evidence, it may perhaps be expected that students, who reason definitely about their Mathematics capacities, feel profoundly of taking care of numerical issues, act promptly in learning mathematics concepts are possible to do commendably in Mathematics. Research outcomes, for example, Areepatamannil and Freeman, (2008); Roy Baumeister, (2008); therapist Alfie Kohn (2006); Vrugt (1997) demonstrate that students with high and optimistic self- concept are generally certain about their academic works; they do not rely on other people' opinion , they work independently and accept different challenges, do not fear uncertainty, take the setback in their stride and make the necessary adjustments to get back on track, are more hopeful and have confidence in themselves and are extra eager to obligate themselves to their objectives and targets. Research by Robins (2015) shows that as human beings grow or advance in age, their self-concept increases or decreases depending on the type of interactions they experience with their immediate environment. Therefore, the kind of school a student goes to may likely have positive or negative effect on his or her academic self-concept. No doubt as observed by Judge and Bono (2001) and Parker (1998), people in all works of life are probably going to achieve increasingly in any event if they sense capable in what they do, self-assured, as well as feel positively about themselves.

Bandura (1989) finds out that a child's assumptions about his or her own particular abilities ascertain how he or she acts and that self-concept effects inspiration and determination a youth will put into an action. If a student trusts he/she can accomplish intellectually, he will be more possibly put extra efforts in what he/she does and accomplish his objective. Students increase self-concept, both positive and negative, through those he/she relates with in the schools he/she goes to. What are the commitments of the parental and environment factors for students in emerging academic self-concept? Do the academic self-

concept and achievement of students have any influence on their career aspirations as well as the kind of school they go to? This is the centre of attention of this study.

It is assumed that student's career aspiration, students' achievement in mathematics and students' mathematics self-concept tend to be low as soon as they change from low competitive primary schools to high competitive schools. There is therefore the need to mount intervention programme that can be used to soar up the self-concept of students in the early ages of junior secondary school which in turn will improve students' achievement in mathematics and promote career aspiration in mathematics. The result of this becomes evident thinking about the significance of mathematics in the socio-economic advancement of individuals and the society. Therefore, in this study, the emphasis will be on how to identify students that are prone to exhibit low self-concept, low career aspiration, low achievement in mathematics and to mount intervention programmes to help them become more self-confident of themselves.

What are the consequences for learning intercessions? Assumed that self-concept and school achievement commonly impact each other, educators and guardians ought to go for enhancing both academic accomplishment and self-concept in students. Attempts to improve self-concept or school implementation only can be predictable to be brief (Marsh and Craven, 2006). As students shape self-concept through social comparison, teachers can help keep away from or reduce perspectives of low self-concept by minimising social comparisons. More emphatically, teachers can aid modify the frames of reference students use in assessing their skill (urging students to concentrate on the area that they have made progress instead of focusing on how others are performing in class. Tutors likewise can limit social correlation among students by trying as much as possible to stop praising or recognising only the brilliant students in class).

Progressively, endeavours to promote self-concepts are intent on recovering feeling of enabling as well as self-assurance by building a well-disposed and authorize school state that recognise person merits as well as possessions (Liem, McInerney and Yeung, 2015). Seaton (2004) clarifies that the positive supporting of academic self-concept is a fundamental informative goal. This is additionally bolstered by a study done by Ming (2003), who presumes that numerous students who need inspiration and have learning issues are the individuals who have low level of self-concept. Along these lines, intercession programmes and counselling like Cognitive Behavioural Group Therapy (CBGT) and Solution Focused Brief Therapy (SFBT) on improving career aspiration, students' achievement in mathematics and self-concept are essential to assist students with overcoming their learning issues and

progress their exists. Cognitive behavioural group therapy (CBGT) and the solution focused brief therapy (SFBT) have diverse suppositions, separately; problem-solving versus solution-building.

To be more specific; CBGT speak about the participant's history, when/ for what reason does the issue happen? While SFBT sessions concentrate more on the future life of the students, together with the students' optimal future and his/her objectives. In current psychotherapy, CBGT is a technique that causes participants to comprehend the contemplations and emotions that impact their practices. An extensive variety of clutters and issues can be treated with cognitive behavioural therapy. Since the viability of cognitive behavioural therapy is affirmed by numerous proof based studies, Cognitive behavioural group therapy is an extremely powerful strategy in psychotherapy nowadays. Cognitive behavioural group therapy is a blend of cognitive therapy and behavioural therapy. Cognitive behavioural group therapies can be characterized as individual's interventions through the essential expectations that whatever people think clearly affects their feelings and their objectives in life. (Graham, 2005).

Founding fathers of cognitive therapy, Beck and Ellis (1921) started developing cognitive therapy some fifty years ago. The essential supposition of this treatment is that contemplations, sentiments and conduct impact each other. A negative idea prompts a negative feeling, which prompts negative conduct. These negative opinions are frequently unreasonable and not founded on the fact. Such an unreasonable idea frequently keeps up or even fortifies a negative self-concept. To change the conduct, it must be clear which negative emotion(s) and thought(s) lies underneath the specific conduct. Cognitive therapy is founded on gaining of understanding into unconscious feelings and inspirations (Jacobs, Muller, and Ten, 2001).

Behavioural therapy tries to comprehend why the participant shows a particular sort of conduct. Behavioural therapists attempt to take out or change the incentive which has an impact on the specific conduct. They accomplish this change by compensating the participant if there is a change in the conduct. By compensating, rather than discipline if the desirable conduct is absent, the specialist makes it clear to the participant what he or she ought to do, rather than what he or she ought not to do. This sort of strengthening is called operant conditioning (Skinner 1950; Verheij and Verhulst, 1996).

Cognitive behavioural therapy depends on the supposition that unreasonable considerations prompt useless conduct. Cognitive behavioural therapists attempt to change the substance of these unreasonable contemplations; they endeavour to transform these into

'helping thoughts'. Techniques from behavioural therapy are utilized to change these negative considerations. A vital instrument in cognitive behavioural group therapy is the ABC-model. Cognitive Behavioural group Therapy (ABC Model) possibly is labelled by way of "as I contemplate, as a result I feel (and perform)!"

- Activating Event – how the participant quickly translates the occasion
- Beliefs about the occasion – the way the participant assess the situation can be normal or unreasonable
- Consequences – how you feel and what you do or distinctive considerations (how the participant feels about the situation and the step/steps him /her takes to handle the situation). (Jacobs, Muller, and Ten, 2001).

Fig. 1.1

In Fig. 1.2 and Fig.1.3 we can perceive how that negative occasion happens, one can translate it positively or negatively. How one translates it influences, how one feels, considers and acts.

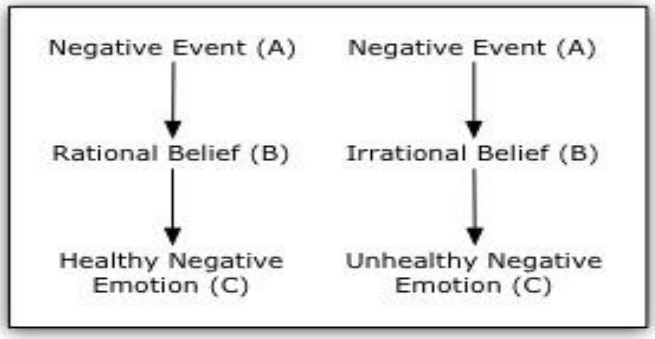


Fig. 1.2

The ABC-model clears up the setting of the conditions. The 'A' stands for 'activating event'. This incorporates the occasion that prompts the insufficient emotions and conduct. For instance, the participant has unsatisfying grades in his/her mathematics score. This occasion drives specifically to 'B'; the belief system. This framework is a reasoning

procedure which happens amongst 'A' and 'C'. Our confidence organisation affects our opinion.

In the instance as portrayed in Fig. 1.2, the unreasonable idea could be: 'I generally need to perform well.' This idea prompts 'C'; outcomes. The unreasonable behaviours offer ascent to silly emotions and conduct. In this case, it could prompt persevering of an undesirable reflection on an issue or loss of vitality, school refusal and sentiments of bitterness. This model gives knowledge into the participant's conviction framework. The participant will find which unreasonable idea prompts negative sentiments and conduct: Sperry, L (2010).

To begin the intervention, the DEF-model in Fig. 1.3 is used. The 'D' remains for questioning silly beliefs. This comprises of testing (debating) a participant's nonsensical beliefs as straightforwardly as could be expected under the circumstances. 'E' remains for the impacts of changing one understands of a circumstance. This is a route by which a man loses their indications of nervousness or pain and sees a circumstance in an unexpected way (something different therapists call subjective rebuilding). In a perfect world, the participant makes move to take care of the issue or has a less troublesome response to the circumstance, while the "F" stands for the feelings (new) of the participants i. e. how does the person feel about this now?

The intervention begins with ('D') testing the irrational thoughts. Therefore the participant will to effectively utilize this new information by rehearsing new, discerning reasoning ('E') and the new conduct ('F'). The DEF-model would prompt the accompanying: to begin with, the guide would challenge the nonsensical considerations of the students: ''what will you say to your closest companion if he revealed to you that he generally needs to perform exceptionally well?' This sort of activity will prompt an advancement of new, sound views: 'It is difficult to perform well constantly.' This idea sets the initiating occasion in context and will prompt diverse feelings (high-spirited) and conduct (returning back to class) (Jacobs, 2008).

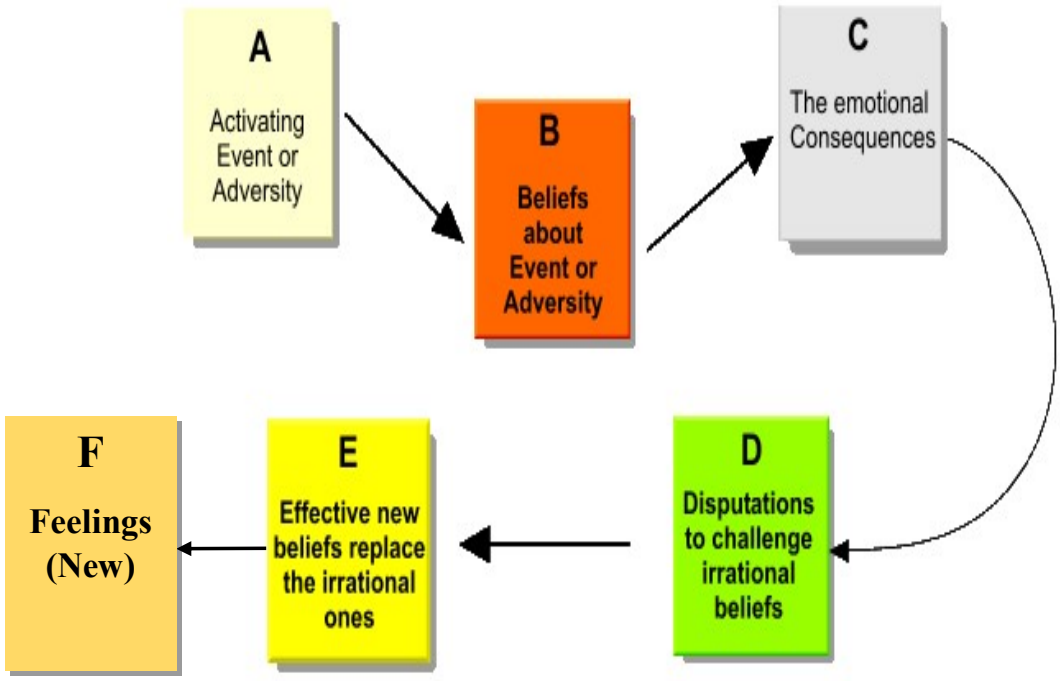


Fig. 1.3

Solution-focused brief therapy - otherwise called solution-focused therapy - is on how to manage therapy in perspective of solution-building rather than critical thinking. Though it recognises current issues and past causes, it dominatingly examines a man's present problem and his desires for the future assist them to focus on the future and use their particular characteristics to attain their aims, De Jong, and Berg (2008).

Solution-focused brief therapy is viewed as a time reserved approach. It was created in America in the 1980s by a couple group Steve de Shazer and Insoo Kim Berg (2008), alongside their group at the Brief Family Centre, and established the treatment on some fundamental methods of insight and suspicions like: (I) Transformation is steady and sure. (ii) Importance on what is alterable and conceivable. (iii) Therapy is little period. (iv) Focus on the future - history isn't basic.

Instead of overstating on a person's shortcomings and impediments, Shazer and Berg's solution-focused therapy focuses exclusively around a man's characteristics and potentials to move on. The therapist will assist persons to envision a strong as well as full image of exactly how they understand their promising future plus in what way things will be well when modifications are complete. The solution-focused approach was established on real observation rather than on mere information received from people which might not be true; Berg, de Shazer (2007). Any practices or words with respect to the therapist that

dependably prompted positive remedial change with respect to the students were meticulously noted and joined into the SFBT approach.

Inquiries as well as accolades are the essential instruments of the solution-focused approach. Solution therapists and counsellors purposely abstain from influencing understandings and once in a while to go up against their participants. Rather, they centre on distinguishing the participant's objectives, producing a definite portrayal of what life will resemble when the objective is refined. With a specific end goal to create viable arrangements, they seek perseveringly through the student's life when they are performing very well in their academic works, Murphy (2008).

Solution-focused brief therapist invites the students to imagine their favoured future by depicting what their life will resemble when they perform very well in their academic works and their problems is both no more or adapted to so agreeably that it never again constitutes an issue. The counsellor and student at that point give careful consideration to any conduct on the student's part that adds to moving toward the student's objective, regardless of whether these are little additions or bigger modifications. To support this approach, thorough interrogations are gotten on some information about how the participant figured out how to accomplish or keep up the present level of advance. Solution focused therapists trust individual change is as of now consistent. By helping individuals recognize positive bearings for change in their life and to take care of changes right now in process they wish to proceed with, Solution-focused brief therapists enable participants to develop a solid vision of a favoured future for them. Solution-focused brief therapists bolster students to distinguish times in their life when their hopes are according to the future they prefer. Similar or different between their past and future are analysed. By conveying little victories to mindfulness and supporting students to recurrence their effective decisions and practices, when the issue isn't there or less extreme, the therapist encourages participant development towards objectives and favoured prospects they have distinguished. A fundamental considerate of the SFBT management approach is personified in the acronym: *M.E.C.S.T.A.T.* Corey (2009).

M – Miracle Questions

E – Exception Questions

C – Coping Questions

S – Scaling Questions

T – Timeout

A – Accolades

T – Task

Miracle Questions*:*

The Miracle Question helps to:

- Establish objective
- Begin speaking about positions afterward result
- Evade contradictory problematic meanings
- Acquire way out unconnected from the problematic
- Discover fresh potentials
- Lessen responsibility around the difficulties

Instances of miracle questions are: "Envisage this night when you are asleep a miracle happens. The miracle is the problems as well as difficulties that have got you here (to therapy) have one way or another been fixed when you were asleep." "What is the initial minor thing that says this miracle has occurred" "What you would be doing or what would you notice that is dissimilar to say the miracle has happened?" "What would other persons notify you were undertaking?"

Exception Seeking Questions:

Exceptions are conditions after the trouble did not happen, or happened with fewer occurrences *or was present in a less severe form.* They are applied to aid the participant determine results. Instances of Exception-Seeking Questions for a Student are: "I understand that you made 4 out of your 7 classes." "How did you succeed to pass those 4 classes?" (Or "What did you do?") "What would your teachers say you did that enabled you to make it?" "What did the tutors do that enabled you made it?" "Are there periods while the difficulty doesn't occur or is not as much of powerful or fewer recurrent?" "When was this?" "What was dissimilar?" "How did you sort this out?" Fast transformation is likely when we practice the solution-focused method to assist recognise exclusions.

Coping Questions:

The questions *are used to support the students' self-concept* when students are passing over actually difficult periods as well as can hardly ascertain vigour to sort out something around their difficulties. Instance of coping question is: "What aids retain you moving on despite the fact that things are actually tough?"

Scaling Questions:

Scaling Questions applied to measure objectives, development, and incentive to modification or act. They inspire wisdom of going onward (despite the mark is 0). They enquire the participant to define what it would be comparable at dissimilar mark. The participants are questioned what would occur to go up and doing a scaling point as well as what requirements to occur to remain at a sure scaling point. Instances of scaling questions are:

Use a scale from 1 to 10 and design the scale with participant

("10" being excellent, "1" being poorest)

1. "What says that you are at a '6'?"
2. "How is '6' not the same for you than a '3'?"
3. "What would remain people (family, friend, etc.) say where you are at on the similar scale?"
4. "What would it earn you to rouse it higher by 1 point on the similar scale?"
5. "When you rouse up by 1 point, what would you be doing in a different manner in your lifetime?" "With your household (groups, etc.)?"
6. Occasionally you might need to request: "How possible you are not a '3'?" "What are you achieving in good form?" "What do you need to sort out so that you can stay at '10'?"

Time-Out:

A SFBT psychotherapist usually precedes a short pause in the second half of every treatment period in which they reproduce on what has happened in the gathering. Ensuing that, the single person is praised as well as presented a healing 'note. This is typically an impression for an applied trial which can aid you in attaining your recognised objective.

Accolades:

Commendations are additional important feature of Brief Therapy. Authenticating what participants are previously carrying out greatly, as well as admitting exactly how problematic their difficulties are, inspires modification whilst providing you the note that your psychotherapist has been paying interest (to be precise, comprehends) as well as, that they show concern.

Task:

As soon as SFBT psychotherapists have formed an optimistic impression through commendations as well as have revealed earlier way out as well as exceptions to your difficult situation, they can moderately call you to do extra of what has earlier functioned, or to attempt modifications they would like to put into practice – often named "a trial" "duty" or "task". Task Growth as well as Objective Setting Question is used afterward exception-

seeking plus scaling questions have been put into practice to aid participant recognise his/her achievements. The goal setting procedure offers an awareness as well as onward drive to problematic resolve. Instance of Task Development Question (Objective Situation) are: “Founded on the achievement you have defined currently concerning this difficulties, what is *one* slight objective you can established to inspire this afresh performance?”

SFBT and CBGT intervention centre around helping the students distinguish and develop way out while diminishing the accentuation on negative parts of the student’s life. By joining parts of the two treatments, capable instruments made to enable students to accomplish their objectives.

Specialised school counsellors’ specific function is to eliminate obstacles to students’ achievement; increasing student’s knowledge surroundings as well as backup students’ educational attainment (American School Counselling Association, 2005) by executing a far reaching school directing project that "prompts increment students’ accomplishment" and "backings the school's educational task" by urging consideration "to circumstances inside the schools that overthrow, disappoint and upset students’ academic achievement" through the usage of cognitive-behavioural and solution focused brief interventions by putting the students into little sets.

If a school counsellor cans deskill students to deal with their broken contemplations and future goals, at that point enthusiastic misery and useless behaviours will be diminished. School counsellors utilising CBGT and SFBT give solid meaning to the cognizant points of view of their students, put prominence on the past, current and the future through counselling. A portion of the parts of SFBT and CBGT are fitting for usage in schools because of the generally modest amount of meetings required intended for counselling and the directness of the treatment design between the therapist and student: Sklare, (2005)

Cognitive Behavioural Group Therapy as well as Solution Focused Brief Therapy intercessions in school assist students to understand three things: exactly how their believed outlines influence their performance, how they can take control of these believed outlines as well as how they can relate intercessions to influence performance modification as well as how they can work to their upcoming objectives (Hall and Hughes, 1989). Lately, school therapists have been chiefly knowledgeable of the way their intercessions add to the growth of student school attainment (Brigman and Campbell, 2003; Brown and Trusty, 2005; Sink, 2005a; Sink, 2005b; Webb, Brigman, and Campbell, 2005). This is in line for, in portion, to the augmented emphasis on qualifying school therapy itself over its influence on school attainment in students as well as additional indication centred training named for by the

American School Counsellor Association (ASCA) and National School Counselling Model (2005). If these interventions on students are well managed it will increase their motivations which will also help them achieve very well in their school. Highly motivated students will be determined to work and find learning interesting. As soon as the motivational interviewing is perform properly, the participant, and not the counsellor, is the one to state the influence for the modification.

Brophy (1988) describes student motivation to study as student propensity to discover academic performance significant as well as valuable and to attempt to get the planned educational profit from them. Motivation refers to "the reasons underlying behaviour" (Guay, 2010). Paraphrasing Gredler, Broussard and Garrison (2004) generally describe motivation as "the quality that moves us to do or not to do something". As Deci, (1999) observe, "intrinsic motivation energises and maintain performance throughout the impulsive satisfactions inherent in efficient volitional act. According to Woolfolk (1993) students who find learning intrinsically satisfying, worth meaningful and increasing their store of information, believe learning is attractive and fulfilling for them are showing signs of being motivated to learn.

Researchers frequently distinguish intrinsic motivation with extrinsic motivation, which is motivation rule by reinforcement incident. According to Stipek (1996), early approaches to the study of motivation were entrenched in the literature on extrinsic reinforcement. However, the profits of extrinsic rewards have a tendency to perish over time (Stipek, 1996). Teachers must mount winning act on conditions of aptitude rather than attempt since achievement converse optimistic information concerning capability to students (Schunk, 1983).

The idea of intrinsic motivation is intimately connected to intrinsic worth and is typically difference with extrinsic motivation, which is influence by strengthening unforeseen event (Guay, 2010). Naturally, manoeuvring of extrinsic motivation is result by the stipulation of rewards, which can be also concrete (money, grades, human rights) or insubstantial (for instance, commend).

Students, who take class actions sincerely, endeavour to be familiar with and progress, not just end the work or obtain the grade but give concentration, work hard and persevere, even if they are not chiefly paying attention in the topic are showing signs of being absolutely motivated to study. Students who have unenthusiastic self-concept and low self-worth typically are not motivated to learn and they are expected to drop out from school. Individuals should be more motivated to the level that they sense they have power over their individual achievement and let down (Eccles and Wigfield, 2002).

Nowadays, most students do not take their studies seriously; they just learn to pass their studies without showing much interest in school works. Could it be the students are not motivated to learn? Or could it be that they have negative self-concept? Or that their teachers and parents failed to motivate and encourage them to learn and excel in their academic work? These questions show the importance of the roles significant people play in developing the self-concept of students. Woolfolk (1993) explain student motivation to learn as an inclination to discover academic exercises significant and beneficial and to endeavour to infer the expected academic advantages from them. Student with positive self-concept, are further persuaded to skilled and successful. Students who exhibit damaging self-concept usually will not be motivated to learn and they are probably going to drop out from school irrespective of the kind of socio-economic background such a student may have.

The effect of socio-economic status of parents on students' academic self-concept is optimistic (Bachman and O'Malley, 1986; Marsh, 1984). White (1982) noticed that many factors are used as indications of SEB; he indicated that income, education, and occupation of parents were the mainly predictable procedures. Pong and Ju (2000) demonstrate that higher socio-economic status predicts better academic achievement. Home background has been established to clearly impact individual student accomplishment. Parental word related status, parental training, family riches, and social belonging all had constructive relationship with academic accomplishment (Organization for Economic Cooperation and Development, 2001a). Furthermore, investigation has demonstrated that different issues, for example, better parenting and the social assets inside the home (Marks 2006) can influence academic achievement. Some studies suggest that student from higher socio-economic background is associated with better academic performance and the extent to which socio-economic background mediates the connection between mathematics self-concept, students' mathematics achievement and career aspiration will be examined in this study. Children from low SEB are in a very bad state in terms of education in nearly each likely mode: little provision from parents, community as well as school region, aptitudes further dropped by pressure. Consequently, not only academics are low, but also mental growth as well as potentials for career is looking slim.

Although, none of the studies reviewed observe whether individual SEB had a reasonable consequence on the BFLPE, but the research investigative the relative among socio-economic Status and academic achievement and between socio-economic status and academic self-concept propose that socio-economic status might be an issue that can manipulate the BFLPE. Perhaps students from high Socio-Economic backgrounds may

experience extra stress to do capably at school and comply with their parents' desires than individuals from low socio-economic background thus the BFLPE might be greater for students from high socio-economic background. For instance, they might want to work extremely hard to satisfy their parents probably because of the status of their parents. In other words, the negative BFLPE might be reduced for high Socio-Economic Status students contrasted to students from little Socio-Economic Status background.

Students from High Socio-Economic Background are probably going to have guardians who are more exceptionally skilled. Parents with advanced education levels might be more ready to furnish their children with coping plans like good textbooks, computer, mathematical set and models of persistence. Hence, students from high Socio-Economic background might be more talented to manage the stresses as well as burden of high-ability classes and schools than students of low Socio-Economic upbringings. Therefore, contrasted with students from low Socio-Economic backgrounds, higher Socio-Economic backgrounds students could suffer either much from the BFLPE. Ononuga (2005) specified that the kind of job a parent do would define his revenue and his social position. According to Ogunshola and Adewale (2012), parents of diverse profession group repeatedly have dissimilar method of child raising, dissimilar habits of punishing their children as well as diverse habits of reacting to their children. Though it has been postulated by earlier literature (Meyer, 1993; Ogunsola and Adewale, 2012; Osunloye, 2008; Schulz, 2005) that parent's socio-economic background effects children' academic act in school; on the other hand, self-motivation can help or affect these variables' relationship badly because a student from a decent parental socio-economic background might not attain high academic performance if he/she is not strong-minded to work hard. However, Ogunsola (2012) in his study says, socio-economic as well as education background of parents is not important factors in students' performance. Therefore, one can be motivated by individual drive or wish to attain achievement. Other studies (Udida, 2012) contended that children from rich families record poor academic performance in schools. Hence, this study will establish whether Socio-Economic Status can moderate between the BFLPE, self-concept, achievement and career aspiration.

1.2 Statement of the Problem

When students move from primary schools to secondary schools there seems to be a tendency to experience low self-concept in mathematics, low achievement in mathematics as well as low career aspiration in mathematics. This phenomenon of negative effects on

students' self-concept, students' achievement in mathematics and students' career aspiration is known as Big-Fish-In-A-Little-Pond (BFLPE).

The big-fish-little-pond effect (BFLPE) is based on students' comparisons of their individual aptitude with the aptitude of their colleagues. This social contrast procedure leads to a lower self-concept when the class level is high and to a higher self-concept when the class level is low. More precisely, BFLPE can be explained in two ways: the first is that individual capacity is definitely associated to academic self-concept. Students who perform well feel positively about their academic capabilities than those that do not perform well. Secondly, the BFLPE also predicts that the average ability school has a poor outcome on academic self-concept. Students in high-ability schools regard other students as being more intelligent than they do.This contemplation causes negative effect on student self-concept.This is the feature of the BFLPE.

Most studies on BFLPE are based on samples from Western World. The findings can therefore only be generalised across such settings. In Africa settings and indeed in West Africa, the focus was on the self-concept of students associated with big-fish-little-pond effect (BFLPE) without providing therapy for such students. Moreover, studies on BFLPE used survey method involving small sample, which might have influencedthe results and generalisationacross Africa setting.

This study, therefore, was designed to identify students associated with BFLP phenomenon. It also determined the effects of psychological therapies (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy) on mathematics self-concept, achievement and career aspiration of students associated with big-fish-little-pond effect in Oyo State.

1.3 Research Questions

1a. What is the level of performance of JSS one students in their last common entrance examination from academically and non-academically selective schools?

1b. What is the level of performance of JSS one students in mathematics achievement test for academically and non-academically selective schools after one term of teaching?

2. What are the trends of JSS one students' score in Mathematics Self-Concept?

3. What proportion of JSS one students is qualified as big fish in a little pond?

1.4 Hypotheses

The following null hypotheses will be tested in the study:

$H0_1$: There is no significant main effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy and control) on students'

(a) Achievement in mathematics.

(b) Mathematics self-concept

(c) Career aspiration

$H0_2$: There is no significant main effect of motivation on students'

(a) Achievement in mathematics.

(b) Mathematics self-concept

(c) Career aspiration

$H0_3$: There is no significant main effect of socio economic background on students'

(a) Achievement in mathematics.

(b) Mathematics self-concept

(c) Career aspiration

$H0_4$: There is no significant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students'

(a) Achievement in mathematics.

(b) Mathematics self-concept

(c) Career aspiration

$H0_5$: There is no significant two-way interaction effect of treatment and socio economic background on students'

(a) Achievement in mathematics.

(b) Mathematics self-concept

(c) Career aspiration

$H0_6$: There is no significant two-way interaction effect of motivation and socio economic background on students'

(a) Achievement in mathematics.

(b) Mathematics self-concept

(c) Career aspiration

$H0_7$: There is no significant three-way interaction effect of treatment, motivation and socio economic background on students'

(a) Achievement in mathematics.

(b) Mathematics self-concept

(c) Career aspiration

1.5 Scope of the Study

The research covered junior secondary school 1 students in Oyo state, Nigeria. The study investigated the effects of psychological therapies (Cognitive Behavioural Group Therapy, Solution Focused Brief Therapy and Control) on BFLP effect of students' career aspiration, mathematics self-concept and achievement on mathematics self-concept of junior secondary students in Oyo state, Nigeria. However, the effects of Cognitive Behavioural Group Therapy, Solution Focused Brief Therapy and Control on student-level factors such as students' self-concept, students' achievement in mathematics, students' career aspiration, motivation and socio-economic background was also assessed in the study.

1.6 Significance of the Study

The results of this research will give counselling psychologist more insight on how to make effective therapies such as cognitive behavioural group therapy and solution focused brief therapy to enhance the performance in students. Working and identifying poor performance on the students, assisting them in identifying their weakness, eliminating barriers in difficulty of mathematics as a subject and make available all the necessary information they will need in making a performance in handling problem.

The outcome of this study would provide suggestions, recommendations and insights to students and enable teachers to have the consciousness of the importance of self-concept and the vital roles it plays on individual life. It will enable teachers to encourage, suggest, assure and reinforce students that they are mentally proficient and capable and competent, and in this manner endeavour to work harder. These words of comfort are expected to exhibit an inspiration on the self- confidence of the students making them see themselves as mentally able and accomplished, and thus strive to study hard in order to perform well academically.

The answers to the research questions in this review will offer critical evidence for researchers and professionals. Not exclusively will it educate forthcoming research

endeavours give extra data about the idea of academic self-concept, it will help managers and therapists in building up the prescribed procedures for quickened and educationally thorough projects for gifted secondary students. The result of this report will also offer baseline information for upcoming investigation in this area.

1.7 Operational Definition of Terms

1. **Academically selective school:** The criterion used through the state Ministry of Education in placing primary school students into academically selective schools and academically non-selective junior secondary schools is the cut-off score. Students with 70% and above are placed in academically selective schools.

2. Academically non-selective school: The criterion used through the state Ministry of Education in placing primary school students into academically selective schools and academically non-selective junior secondary schools is the cut-off score. Students with less than 70% are placed in academically non-selective schools.

3. Mathematics self-concept:

Mathematics Self-Concept of the students was measured by the Mathematics Self-concept Scales with 15 items. Positively expressed items were evaluated as 4, 3, 2, and 1, while scoring was reversed for adversely expressed items. Hence possible range of scores is between 15 and 60. The mean score was found, such that higher scores indicate higher confidence in mathematics which indicated high self-concept and lower scores indicate lower confidence in mathematics which indicated low self-concept.

4. Career Aspiration:

Students' career aspiration Scale was measured by the instrument tag Students' career aspiration Scale (SCAS). Students' career aspiration Scales has 13 items. Positively expressed items were evaluated as 4, 3, 2, and 1, while scoring was reversed for adversely expressed items. Hence possible range of scores is between 13 and 52. The mean score was found, such that higher scores indicate higher career aspiration in mathematics which indicted high career aspiration and lower scores indicate lower career aspiration in mathematics which indicted low career aspiration.

5. Socio-Economic Background:

This denotes to situation of acknowledgement which individual finds him/her in the civilisation. Such a situation might not be genetic but developed over individual hard work such as schooling, prosperity, and job as well as community discussion. Socio-economic position of children is yet to be established. Their socio-economic characteristics, is derived

by the socio-economic environment of their domestic home-based, otherwise of their Parents. Proxy measures were used to determine the socio-economic background of the students from the answers provided in the parental socio-economic scale.

6. Motivation: Students' Motivation Scale of the students was measured by the instrument tag Students' Motivation Scale (SMS). Students' motivation Scales has 15 items. Positively expressed items were evaluated as 4, 3, 2, and 1, while scoring was reversed for adversely expressed items. Hence possible range of scores is between 15 and 60. The mean score was found, such that higher scores indicate higher motivation in mathematics which indicted high motivation and lower scores indicate lower motivation in mathematics which indicted low motivation.

7. Cognitive Behavioural Group Therapy: Treatment sessions were separated into three subjects or components that include two or three sessions each. The underlying three sessions tackle how contemplations affected disposition. The accompanying three sessions inspected step by step practices that impacted disposition. The last two sessions talked how coordinated efforts with others impacted our feeling. A depiction of each unit is given, for example Opinions (sessions 1-3). The fundamental motivation behind this unit is to exhibit how our contemplations impacted our temperament. Exercises (sessions 4-6). The sessions that created this unit enabled members to look at the connection amid their investment in enjoyable exercises as well as low self-concept effects which affects their poor performance in their academic works like mathematics. The fundamental target of this component is for young people to pick up on the way to manage them exists as well as recognize to pick up a feeling of flexibility. Organised with the psychotherapist, they create choices plus objectives, approaches as well as recognize exercises that will enable them to enhance their state of mind. Individuals (sessions 7-8). The sessions that made up this module presented how relational connections influence mind-set. The collection worked with the matter of peer groups in addition classmates, and the way these affected their academic performance when they compared their performances with their peer groups.

8. Solution Focused Brief Therapy:A variety of SFBT questions, techniques, and tasks were implemented. Additionally, the researcher made a note of each subject's personal goal during the orientation interview and asked each subject to provide a scale score for their progress toward that goal at that time and at the beginning of each group session. Finally, in the role of participant observer, the researcher took informal process notes each group. Forming (Session 1-3), this had to do with the Objectives, students get acquainted in the group and with group rules and procedures where students introduced themselves and

established ground rules. Students shared what they wanted to change in their lives. Also in this session, the establishing Goals was set in where Students began to establish a process goal. Keys to solutions (Sessions 4-6), students was helped to identify solutions (keys to solving their problems) and progress toward goals. Termination (sessions 7-8), here students reviewed the skills they have learned and were helped to continue the progress they made.

9. Control:

10. Big-Fish-Little-Pond effect: Big-Fish-Little-Pond Effect is the negative effect on the academic self-concept of a student resulting from transition from a less academically rigorous setting to a more academically rigorous setting.

1.8 Acronyms

ASC: -	Academic self-concept
BFLPE: -	Big-Fish-Little-Pond Effect
CBGT: -	Cognitive Behavioural Group Therapy
CER: -	Common Entrance Result
GSC: -	General self-concept
NASC: -	Non-academic self-concept
SEB: -	Socio-economic Background
SFBT: -	Solution Focused Brief Therapy
TBD: -	To Be Determined
ABC MODEL: -	Adverse event – Beliefs – Consequences
DEF MODEL: -	Dispute – Effective new belief – Feeling (new)

CHAPTER TWO
LITERATURE REVIEW

This chapter introduce the review of related literature. The review of literature will be done under the following sub-headings:

2.1 Theoretical Background

- Festinger Social Comparison Theory

2.2 Conceptual Review

2.2.1 Big-Fish-Little-Pond Effect (BFLPE)

2.2.2 Self-concept models

2.2.3 Cognitive Behavioural Therapy counselling (CBT)

2.2.4 Solution Focused Brief Therapy (SFBT)

2.2.5 Students' Motivation

2.2.6 Socio-Economic Background

2.2.7 Student's Career Aspiration

2.2.8 Students' Achievement in Mathematics

2.1 Theoretical Background

The hypothetical foundation for this work depends on the social comparison hypothesis (Festinger 1954; Diener and Fujita 1997; Suls 1977; Suls and Wheeler 2000). He recommended that individuals have an inborn determination to assess themselves, frequently in contrast to others. In Social Comparison Theory background, Festinger trusted that we participate in this comparison procedure as a method for building up a standard by which we can make exact assessments of ourselves.

His central idea was that social comparisons between the self as well as other people are an essential mental system impacting individuals' judgments, encounters, and behaviour. He thought that persons continually involve in social comparisons when they are challenged with info about how others are, what others can as well as cannot sort out, or what others have attained as well as have unsuccessful to attain, they connected this notify on to themselves (Dunning and Hayes, 1996). Similarly, when they want to distinguish in what way they themselves are or what they themselves can and cannot do, they do so through associating their individual features, fortunes, as well as flaw to those of others (Festinger, 1954).

Festinger challenges the basics of the way an individual practises opinions as well as feelings on the point of individual's personal competences. As said by him, he supposed that persons have the effort to measure their feelings as well as to distinguish more around their aptitudes and once they are unable of assessing their sentiments as well as aptitudes; they incline to associate themselves with others (Martin, 2001). As stated by him, persons own a determination for self- appraisal. Individuals desire to assess their feelings as well as get a little impression of how accomplished they are by getting specially info once they compare themselves to like, moderately than unlike persons. His model, though, was directed by three vital questions: Why do persons involve in social comparisons? To whom do they liken themselves? How do social comparisons affect the personality?

In sequences of nine hypotheses, eight corollaries, and eight deviations, Festinger (1954) established a theory to define and clarify how individuals use others to get an intelligence of their comparative position in directive to assess their skills as well as thoughts. For the intention of the current investigation, only Hypotheses I, II, III, IV and VII are pertinent, in addition only abilities will be deliberated upon at this time.

The hypothesis' important recommendation is that individuals have a motivation to access their skills, meaning that people differentiate their aptitudes with those of others "who resemble them on qualities to performance" (Hypothesis I), and once this is impossible in an unbiased, non-social method, individuals contrast themselves with others to access themselves (Hypothesis II). Without being sure about what they can achieve, individuals do not have the information important to take decisions for everyday living, thus may settle on choices that are not behavioural resourceful. For instance, how does student in a mathematics class in his/her school knows whether he/she is good enough to enter competitions with another student in a mathematics class in another school?

As Festinger perceived, it is frequently difficult to impartially decide the degree of one's capacity. Links with others can give this information and maybe lessen these doubts, accordingly enabling individuals to settle on choices for regular existing. Festinger (1954) developed these early hypotheses by portraying how individuals choose who to liken themselves with. He proposed that individuals would stop contrasting themselves with other people whose capacities were different from their own, while deciding how great individual's presentation is, the greatest instructive correlation is to compare with somebody with comparative related measurements, for example, time of life and determination. Festinger (1954) enlarged on these previous hypotheses by telling exactly how person's choice comparison aim. He assumed that persons would stop comparing themselves with others

whose aptitudes were very dissimilar from their own (Hypothesis III), particularly if they were dissimilar on pertinent proportions. Festinger hypothesised that persons would wish to associate themselves with others whose skills were near to their own, because this would deliver a further precise assessment of their aptitudes than a comparison with somebody whose capabilities were very dissimilar.

According to the theory, a JSS I student will not compare his/her mathematics ability with the student in the lower class (probably nursery school) or those in the higher class (may be SS3 student), in light of the fact that these correlations would not give a precise assessment of his/her mathematics abilities. A comparison with the previous would prompt an exaggeration the student's capacities, while a comparison with the last would bring about an unsure representation of the truth. In this way, neither of the correlations would give steady and exact evidence.

Festinger (1954) also hypothesised that the normal movement to stop comparisons with very dissimilar others might not happen in particular circumstances. Furthermore to choosing persons for comparison determinations, Festinger deliberated that comparisons might be made with groups (Hypothesis VII) and that circumstances could rise in which comparisons might be involuntary on the individual. He recommended that if the group was chiefly appealing or if there was no other comparison group obtainable, then the drive to stop associating themselves with others whose aptitudes were very dissimilar from one's individual might not happen. In these conditions, if the aptitude could not be altered, Festinger predictable, in a revelation of the BFLPE, that the individual would experience "disappointment as well as spirits of insufficiency regarding to this skill".

Festinger (1954) similarly estimated that for abilities, "There is a one direction drive upward or downward" (Hypothesis IV). He elucidated this by stating that, in info any occasion in western culture, improving one's operative is much appreciated goal. He highlighted that the one direction director might perhaps work in either an up or down way. Subject to the position of person's inspiration, an individual has the propensity to associate him/herself through others, either in an ascending or descending kind of comparison. Festinger model states that an upward comparison occurs when the individual likens him/herself with others who are better than him while downward comparison suggests that the individual inclines to associate himself with another who is inferior to him.

An extremely inspired individual inclines to involve in an upward comparison, and frequently suppose himself as enhanced or equivalent to the "top performing person". Studies have revealed that if given a chance, persons decide to make an upward comparison as an

alternative of a descending one. Instead, when the person is not pleased as well as when he/she is discouraged, that person frequently involves in downward comparison in order to feel better about him/herself. However, when measured subjectively, selected upward comparisons decreased academic self-concept and selected downward comparisons increased it.

Festinger set out to respond to some questions like, is there any reason why individuals involve in social comparisons? Who are the set of people they compare themselves with? In what way does a social comparison affect the self? He hypothesised that correspondence basically serves to achieve understanding in the group and that this force toward consistency of view depends on two reasons: the first one is that everyone in the group holds the similar sentiments also, second, there is a necessity to concur on a social realism, since this would approve the precision of individual's views as well as feelings (Festinger, 1950). He focused on the significance of others in the development of one's feelings and emphasised how individuals take advantage of others to fulfil their own particular need to improve understanding about themselves.

Hypotheses I and II address why individuals take part in social comparisons. Festinger emphasises that "the holding of improper views as well as imprecise assessments of individual's skills remain gruelling or critical in numerous circumstances". Consequently, the desire to distinguish the personality joined with the impossibility to decide views or capacities by indication to the real planet in numerous circumstances inspires individuals to contrast themselves with other individuals.

Hypotheses III and IV, review Festinger's comprehension of the set of individuals' people will compare. Fundamentally, he hypothesizes that individuals will search out comparative others for comparisons, or, on account of capacities, other people who are marginally improved. He contends that assessments with individuals whose view or capacity are excessively disparate does not give abundant valuable information aimed at measuring the exactness of unique individual belief or capacity - typically since the consequence of such contrast is known beforehand.

Lastly, Hypotheses VII call attention to a few results of social comparisons with the self. Comparisons may cause an adjustment as one's view or capacity, and in all probability this modification goes in the direction of consistency (i.e., absorption). The measure of progress incredibly relies upon the significance, importance, and appreciation for the comparison group and the failure to achieve consistency is seen as unpleasant.

In Festinger's social comparison theory he finally said that, if the comparison serves the objective to self-enhance, ideal principles, in light of the fact that upward comparisons may rouse and supportive to improve. Be that as it may, objectives, thought processes, and need are not the only reasons why individuals compare and are not the solely issues affecting the normal choice procedure. Additional essential rule is the necessity to be highly-organized with one's cognitive possessions. Festinger in (1954) stated that social comparison shapes self- assessments in different ways. Self- insight, full of feeling responses, inspiration, and conduct are altogether moulded by comparisons with others. After contrasting their performance with a supervisor standard, participants feel worse than after comparing it with an inferior standard.

In the first social comparison theory, Festinger (1954) also anticipated a demand toward consistency, which would bring about absorption. For this situation, individuals prefer to assess themselves to be better after a comparison with a high than a low standard. Occasionally, social comparison prompts a difference impact. In this case, people evaluate themselves to be worse after a comparison with a high, superior standard than a low, inferior standard. One critical factor that impacts whether individuals fit in to or differentiate far from contrast values depend on how they interpret themselves before taking part in that sort of social contrast. To recognise how social comparison may impact one is to first figure out which of these theories is tried amid the comparison.

Social comparison theory is relevant to this study because if a student obtain good marks than others, moderately optimistic personality-assessments might be the result. In this way, decent marks as well as downward comparisons prompt a moderately great academic self-concept in that subject. If a student's marks deteriorates than that of others, as well as senses to be not as much as capable in a specific subject in connection to other students, generally bad self-assessments might be the outcome. Accordingly, bad grades and upward correlations prompt a generally low academic self-concept in that subject. From one viewpoint, upward comparisons might support self-concepts while people trust that they also can enhance their own act and skilled as the contrast aim. Then again, downward comparisons may lessen self-concepts as soon as individual think that they may grow not to be as good as their comparison target.

Social comparisons are significant for the self-concept development and they are pertinent for more full of feeling assessments, like, confidence. For instance, in the Wheeler and Miyake investigation the method for correlation affected the full feeling of reaction which means upward social comparison diminished, and downward social correlations

enhanced subjective pleasant individual. Social correlations not only impact students' self-concepts but also improve their performance.

The big-fish-little-pond effect (BFLPE) is founded on students ' contrasts of their own aptitude or act with the aptitudes of their age group. This social comparison procedure advance to a lower self-concept when the class position is high as well as to a higher self-concept when the class position is low. So, two students with equivalent studying effectiveness in an area might grow dissimilar self-concepts once they fit into dissimilar classes by means of dissimilar performance positions. While social comparison investigation typically examines the significances of comparisons with specific other people, investigation on the BFLPE accepts that students liken their individual aptitude by the class or school position. Marsh, Trautwein, Lüdtke, and Köller (2007) suppose that such a conclusion aid as an (unintentionally selected) comparison target prominent to a self-concept reduction following upward comparisons (small fish in a big pond) or to a self-concept growth follows downward comparisons (big fish in a little pond).

Furthermore, Marsh, (2007) associated outcomes established on comparisons with a comprehensive other (class-average achievement) as well as comparison by a given age group. Equally bases of social comparison information contributed unconstructively to self-principles by respect to math aptitude. Picking higher attaining colleagues as correlation objects and also being in high performing classes' diminished self-beliefs. Associating downward with worse accomplishment classmates as well as go to a low accomplishment class improved self- principles. Despite that social comparisons are a vital piece of our mental operative and everyday lives, it isn't astonishing that numerous analysts have utilized social comparison theory to clarify curiosities in connected settings like academic self-concept and academic performance. Subject upon the level of person's inspiration, a man tends to contrast himself as well as other people, either in an upward or downward sort of comparison.

Agreeing with Festinger, student depends on the comparisons with different students to precisely evaluate their individual services, capacities, principles as well as approaches. In circumstances where student's contrasts remain not real, he/she will find him/herself resulting into positions that are also problematic otherwise difficult for his/her existing talent positions. Upward comparisons may improve a student feeling about his/her aptitude and more encouraged to enhance it. It is when students feel better about their aptitude that they may then contrast their capacities with a companion. Downward social comparison is the point at

which your accomplishment is greatly improved. For this situation, when student sees their companion's poor aptitudes really makes him/her feel better about capacities.

Motivation acts prominently in this model and is established by self- rating as well as self-improvement. Self-rating arises when the student searches for optimistic characters in him/her founded on the best person he is attempting to liken himself with. Self-rating, arises when the student make enquiries which features of him/her need to be better to accomplish the position of admirableness of the person he is comparing himself with.

Additionally, social correlation can impact students' self-views when students use different external and internal frame of reference whilst creating self-assessments. They might equate their accomplishment with achievement and targets as well as wants, with determination in individual's subjects, or with other external principles for instance, school assessments and class positions. In the Internal/External -Frame-of-Reference display (I/E demonstrate, Marsh, 1986), students can take a look at their levels of learnt capacity using two dissimilar, yet related, frames of reference: Internal (dimensional) as well as external (social) comparison procedures. In the external frame of reference, students conduct social comparisons: meaning, they liken their activities with those of their colleagues. If their verbal attainment is advanced than their contemporaries', their verbal self-concept will likewise be advanced. Attainments in school subjects characteristically are definitely connected, it would appear sensible to accept that these social comparison procedures will extend to domain specific of self-concepts that are moreover absolutely related.

Procedures of Internal or dimensional comparison have been absorbed on to elucidate the region area of educational self-concepts as well as the consistently low relationships saw in the midst of verbal as well as math self-concept. As showed by this internal frames of reference, students assess their attainments in any specified subject in relation to their own attainments in other subjects. So, gifted students might grow an average self-concept in their poorest subject, even if their performance in this subject is well beyond the average performance of their age groups. Hence, social as well as dimensional comparisons influence the growth of domain-specific self-concepts. Founded on external comparisons with one's classmates' achievements in mathematics, low mathematics skill inclines to lead to low mathematics self-concept. Founded on internal comparisons amid one's individual attainment in mathematics as well as one's attainment in verbal domains, low mathematics skill appears to lead to a rise in verbal self-concept.

2.2 Conceptual Review

2.2.1 Big-Fish-Little-Pond Effect (BFLPE)

As student changes from one academic environment, which is less competitive than the school setting they move into, this will cause stress on the student as they adjust to the new, likely more homogenous setting (Marsh, 1987). The importance of studying this phenomenon is pertinent because the initial negative impact caused by BFLPE may lastingly affect student's academic self-concept, which might harmfully disturb their academic act of doing things (Marsh, 1987). The stress of a student navigating the individual and group dynamics inherent in a school setting is magnified when a student transitions after a primary or lower school to a junior high school or middle school. This effect can be significant amid the progress from primary school to secondary school (Barber and Olsen, 2004; Cauley and Jovanovich, 2006; Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, and Iver, 1993; Parker, 2010). This is a result of the significant developmental changes that occur during puberty (Eccles, 1993) as well as the inherent differences between the social environment and academic expectations (Barber and Olsen; Cauley and Jovanovich) of lower school and middle school.

Parents as well as the humanity in over-all trust that children in academically selective schools will obtain the finest of learning. This might explain the reason why numerous Parents battle to make sure their children accepted into this academically selective schools. Though, a rising organisation of investigation confirmation (for instance Marsh, 2005; Marsh and Craven, 2006; Marsh and Hau, 2003; Marsh, Kŏller, and Baumert, 2001) proposes that separation on the foundation of educational aptitude unable to make best setting in which to teach extraordinary-talented students. Marsh as well as his associates, in their revisions, display that going to academically selective schools has harmful result on students' insights of their school aptitudes

In advanced nations, like United States of America, Australia Britain and Japan among other, there is an on-going debate, among major stakeholders in education, about the value and utility of academically selective schooling (Adegoke, 2015). Some researchers (such as Seaton, Craven and Marsh, 2008) are of the view that students should not be enrolled in schools on the basis of their performance and that there is no need for special schools for gifted children. For example, Marsh and colleagues (Marsh and Hau, 2003) have consistently shown that students in academically selective surroundings have lesser academic self-concept, lower achievement in mathematics and lower career aspiration compared with individual students of equal skill in non-selective environments. Moreover, the effect of being in a high-ability school has been established to have undesirable influence on students over

an extensive variety of instructive results, such as having lower grade point averages, lower standardised achievement test scores, lesser over-all self-concept, as well as poor learning and career ambitions unlike students of the similar capability who go to low-ability schools (Seaton, Craven, and Marsh, 2008).

However, some studies (Colangelo, Kelly, and Schrepfer, 2004; Felhusen, 1991; Feldhusen, Van Tassel-Baska and Seeley, 1989; Gross, 1993; Silverman, 1989) have indicated that academically selective schools for gifted children can have positive social outcomes for gifted children. To Coleman and Faults (1982), placement of gifted children in academically selective schools may end in a decline in self-concept, particularly academic self-concept, students' achievement in school subjects like mathematics and career aspiration only if the class is organised around academic measures.

Social Cognitive Theory (Bandura, 2008) indicates that a student will continually make self-assessments and self-evaluations of themselves as they move in and out of peer groups. This process can be even more heightened when a student is going through puberty (Rice and Dolgin, as cited in Cauley and Jovanovich, 2006). Consequently, this stressful experience will adversely impact the student's academic interest level (Cauley and Jovanovich) by causing the student to either alienate himself or enter into a continuous cycle of mounting stress levels (Rudolph, Lambert, Clark, and Kurlakowsky, 2001). As he is less motivated to perform academically because of the aforementioned psychological disposition, he will be less sure of his academic abilities (Rudolph, 2001); ultimately, negatively impacting his academic self-concept (Cauley and Jovanovich, 2006). As students enrol in schools with a selective admissions process, they may be leaving a previous learning environment where they are recognised as the top-performing student. Upon entering the more competitive and selective school setting of an independent school, they may suffer from BFLPE because "...possibly exceptional students can be demoralised by no longer being a "big fish" within a new, highly selective setting, in comparison with others of equal ability" (Marsh, Koller and Baumert,2001).

2.2.2 Self-Concept Models

In light of the broad review regarding academic self-concept, an exemplar of self-concept was produced with the following factors: capacity, accomplishment, apparent change in accomplishment, social comparison, apparent trouble, aptitude contrast direction, view contrast direction, student self-concept, as well as upcoming school objectives.

Hattie (2008) inspected the causal flow of self-concept and examined three models using a meta-analysis that offers possible explanations aimed at the connection among different aspects of self-concept. First, that student achievement centrals to an optimistic self-concept. This model explains that when a student performs well academically, it will impact his self-concept in a positive manner. This model has likewise been alluded to as skills development model. The second model, the self-enhancement model, identifies the causal pathway as being the reverse of the skills enhancement model, whereas an optimistic self-concept will have a constructive impact on student accomplishment. The last model, the reciprocal model, indicates that the causal pathway works in both directions with achievement and self-concept influencing one another.

Marsh and O'Mara (2008) concluded that school self-concept as well as school achievement interact in a two directional manner, and each influencing the other and that school attainment has a more influential result on school self-concept. Also, Marsh and Yeung (1997) supported that the influence amid student accomplishment as well as positive self-concept is reciprocal in nature. While Marsh (1990b) found that self-concept significantly impacted academic achievement.

According to Marsh (1990) the Internal/External Frame of Reference example additionally sketches out the dimensional aspect of self-concept. As individuals develop their academic self-concept they will make comparisons to their peers' achievement, the external comparison, and will compare their perceived mathematics abilities with their perceived oral abilities, the internal comparison (Marsh, 1990). The I/E Model is simply first of the self-concept models to suggest that academic self-concept is formed not solitary through self-evaluation but likewise by social comparison (Byrne, 2002). Festinger (1954) points out that when individuals begin to examine the opinions and abilities of others in comparison to themselves, they are beginning the uniformity process. By comparing their ability and opinions to others, they may change their behaviour in order to meet the standards of their peer group. In addition, they will begin the social process of finding groups that will match their ability if they are not initially successful at increasing their achievement. An individual's attempt at uniformity parallels the I/E Model, which designates that mathematics self-concept and math accomplishment will be very connected and a similar relationship exists for English self-concept and English accomplishment.

Furthermore, mathematics accomplishment actually really negatively affects English self-concept and English accomplishment harmfully affects mathematics self-concept (Marsh, Shavelson, and Byrne, 1988). Because an individual want to be with people that have

matching abilities and social status, it necessitates that their academic self-concept reflect what their talents are. A student who performs poorly in mathematics will first seek to improve his ability, and then if unsuccessful, look to another area where he may experience success probably in English Language. By joining a group where success is more likely, the student is practicing self-protection. In addition, by seeking the English group, which will enhance his likelihood of success, he is self-monitoring. The last step in the uniformity process (Festinger, 1954) is the desire to be in an environment, which maintains a positive self-concept. The result of this step can be seen as a last resort for a student with a negative self-concept in a certain educational setting but flourishes in another. His natural abilities make it easier for him to fit in or successfully transcend the process of uniformity as suggested by Festinger. By moving to another school where his abilities and talents better match the other students, he is accomplishing two goals: he is maintaining his identity and at the same time he is blending in with the larger group.

Self-concept is a many-sided concept that implies a man's impression of self to the extent of both learnt and non-academic features (Bong and Clark, 1999; Byrne, 1984; Byrne and Worth Gavin, 1996; Shavelson and Bolus, 1982; Shavelson, Hubner, and Stanton, 1976). Educational self-concept suggests a man's "impression of self with respect to achievement in school" (Reyes, 1984, p. 559). However, a man's mathematics self-concept suggests the acknowledgment or confidence in his or her ability to do well in mathematics or self-assurance in learning of mathematics (Reyes, 1984). A man's trust in his or her ability to do well in mathematics and science has a value as to a man's excitement to share in quantitative conditions and is seen as a basic fragment of mathematical and scientific capability.

The connection amid a person’s confidence in his or her aptitude to perform considerably in mathematics or skill has been ascertained to be linked positively to own attainment. From the Perceptual mind-set, it is obvious that all individuals make their own specific reality through their perspective of what they trust to be genuine. Consequently, after the viewpoint of the comprehension understanding research, it indisputably to appreciate a man's conduct, we must distinguish the way that person sees as well as understands his/her knows. In that capacity, to raise the value of students’ educational accomplishment, we must perceive the way students see and understand school as well as school subjects.

Numerous students do not know they can make use of their numerical capacity to take care of their difficulties. A poor way towards the subject is expected to tremendously disturb students at each level of education. The fear of both responding to mathematics studies in class also stepping through numerical exams has been deliberated by Marsh, and Hocever

(1985) and Stodolsky (1985), besides both investigations bring into being steadiness outcomes that doubts of Mathematics frequently worsens to a position called mathematics anxiety through the result of poor attainment in Mathematics. They resolved that persons with deprived approaches to mathematics are frequently stated to have a little self-concept as well as spirits of ineffectiveness. These approaches are established by means of self-belittling comments as well as a continuous non-existence of achievement in Mathematics.

Students' mathematics self-concept, otherwise confidence in their individual aptitudes, is a significant consequence of schooling as well as powerfully connected to fruitful knowledge (Marsh, 1986; Marsh and O'Mara, 2008). Optimistic self-beliefs/ concepts, and also positive encounters in mathematics, increase student inspiration and commitment. Self-beliefs/concepts assume a basic part *in students' understanding about insight, achievement and dissatisfactions, and the learning environment. Students who is certain that knowledge is something that can grow tend to persevere longer with challenging tasks and are stronger even with mishaps (Dweck, 2000; Dweck and Leggett, 1998). Students who trust that their own prosperity or disappointments are in their own control show more high aptitudes in key metacognitive acts, for example, self-* monitoring*, self-concept and objective setting. In like manner, students with more metacognitive aptitudes sort additional gainful acknowledgements for their triumphs and setbacks (Weiner, 2000). Students who have a feeling of having a place with a specific learning condition will probably partake in and add to that group of students.*

Self-concept is subjectively developed by an individual because he or she compares himself or herself with others from the specific perspective of other individual members from a similar social set up, or after the comprehensive fact of assessment of the social gathering, or entirely, to which he or she fit in. A specific student's school self-concept is therefore subjectively assessed on the basis of his/her academic accomplishment levels and mostly on the normal of accomplishment levels of other students in similar school that he or she goes to. Therefore, self-concept (academic self-concept) can't be sufficiently comprehended if the part of frames of reference is overlooked. Social comparison theory by Festinger (1954) is one way to learning Frame-of-reference effects, and it will provide the theoretical support for this study.

Students' sentiments of legitimate associations with others in the mathematics classroom are identified with whether the environment encourages beliefs about the nature and the flexibility of intelligence, dispels preconceived notion in the group he/she belongs, and holds onto chance taking as a fundamental part to learn (Aronson, Fried, and Good,

2002; Eccles, Lord, and Midgley, 2002; Hamm and Faircloth, 2005; Ryan and Deci, 2000). Moreover, students require safe conditions and satisfactory time to deal with complex issues, create gainful manners, and consistently make certainty to drive forward despite affliction and mishaps all of which can support students' sentiments of self-concepts (students' principles in their own particular mathematics capacities), or self-viability (the degree to which students have confidence in their own particular capacity to unravel particular mathematics coursework). How students contemplate themselves shapes their conduct, particularly when confronting challenging situations (Bandura, 1977).

The social comparison aspect of academic self-concept can be a difficult experience to go through as a student navigates the middle school. However, the process that a new student must go through is even more difficult, especially if they are moving from a less academically challenging environment to one that is more challenging (Marsh, 1987).Agreeing with social comparison model (Festinger, 1954), persons associate their views and aptitudes with those of other individuals, once real standards for assessment are not obtainable. For this assessment, contrast with others similar to oneself (for example, in age, sex, or previous act) is utmost educational. Earlier and since the formulation of social comparison theory investigators had spoken matters related by social comparison in the educational situation, with involvement associations in the classroom , collaboration as well as rivalry, plus attainment- connected reasons in children .

Pepitone (1972) existed as one of the principal investigators to factually examine social comparison performance at primary school. She argued that the classroom setting is preferably right to bring about social comparison actions, since it comprises all the mechanisms that are academically essential for social comparison. First, the distinctive classroom has a powerfully easy of assess environment, since educators continuously assess students' school development, as well as parents are worried with the school's assessment of a student. This easy of assess environment provide students need to assess their school routine. Second, factual info about how to handle with new skills that are fundamental to the classroom background is lacking. Students experience cognitive uncertainty when they learn new classroom material. Likewise, classroom orders for example what page to go to, as well as the kind of task is to be accomplished frequently are not well-defined to students.

The lack of unbiased info essential to decrease students' emotional state of doubt influences students to go to associates with a particular ultimate objective to get data on classroom rules. Third, fellow students are important comparison focuses that available. They are not simply significant correlation it's because all students in a class encounter a

comparable classroom experiences, in addition they are readily available, because majority schools' students are clustered in classes according to oldness as well as skill. In total, students are likely to involve on a big rate in social comparison by means of moderately comparable age group owing to the easy way of assess environment as well as the lack of real info that are typical of the classroom setting. Seeing this probability of the incidence of social comparisons in the classroom, it is not unexpected that social comparison remained a matter of practical study amongst investigators concerned in mental procedures at school.

As stated by the Life-Span Model of Suls and Mullen (1982), young people among *4 and 8 years* of age participate in social comparison because of subjective introduction improvement, school encounters, and guardians who impart that relative standing is significant. Though, students in their middle childhood are not ready to recognize comparison with comparable and unique others. This capacity just develops in them later in life. Concerning teenagers' thought processes in comparison, aside from a few special cases, scientists have a tendency to concur that kids do not utilize social comparison info for drives of self-assessment till they are around 8 years old (Ruble, Boggiano, Feldman, and Loebl, 1980). The perspectives of young children to take an interest in social comparison end up being more different as they turn out to be more settled, and when students in western civilisation go into high school social comparison has come to be an essential amount of school lifecycle: students are well talented to associate themselves with alike others, as well as assessments are progressively worried over school marks as well as marks positions. A deep-rooted link of investigation on social comparison in the school setting has dedicated on the effect of social comparison on the educational self-concepts of students at high school that is the way students' sense they are performing at school, and is recognised as the Big-Fish- Little-Pond-Effect (BFLPE). As stated by the BFLPE philosophy schools' average ability levels are adversely connected to student's academic self-concepts. Schools vary in regular aptitude position, in this case every school offers a specific frame of reference that students use for the assessment of their school attainment. Consequently, similarly talented students who go to schools of dissimilar school-average achievement position will employ separately dissimilar frames of reference in assessing their school realization, which then will influence their school self-concept.

Human beings have different levels of self-concept because individuals create and keep up their self-concepts through the way they think about what they have done and view of others concerning what they have done (Brigham, 1986). That is, self-concept is not inborn, but is built and established by the individual through communication with the

environs as well as replicating on that communication. This image is founded on real as well as likely activities in comparison to individual's particular potentials as well as the desires of others and to the individualities plus activities of others. Two individuals can possess precisely the similar achievement, then derive dissimilar positions of self-concept because they or significant persons in their surroundings possess dissimilar positions of hopes.

A few factors such as student's confidence and counselling strategies can either improve or hinder students' self-concept. Building trust in students is a standout amongst the most vital advances educators and guardians can take to guarantee an environment for learning. When student loses self-concept, he/she may lose motivation in learning. By building trust in students, parent and therapists can defend the most essential fixing to progress: The measure of student fearlessness a child has will influence each part of his or her educational objectives. If a child loses trust in school, his or her evaluations will eventually be influenced.

There are several things students must do to have better self-concept. Counselling students will enable them to redress any erroneous views that they may have about their own value or importance and get over any twists that they may have with respect to their qualities and shortcomings. This will empower the students to make truthful and precise evaluation of their endowments, possibilities, centrality, qualities, and shortcomings. Aaron Beck's cognitive skill can be used in this direction. They must heal themselves from deep relationship wounds and build up their very own reasonable appraisal of their individual excellent aptitudes, abilities, and character uniqueness.

The kind of school that a student goes might also hinder or improve his or her self-concept. It is basic to the entire students that they are located in the school that best promotes academic achievement, great self- concept, preferred conduct and social aptitudes. The normal place for students to meet is at the school. Wilson, Ellerbee, and Christian (2011) contend that every school is the place the students get the chance to associate on a more close level. In the school the students get an opportunity to shape cherished companionships and figure out how to work with other individuals. However, as the students get to know one another, they figure out how to create and advocate for self-concept and conduct and social abilities.

In schools, students have the opportunity to meet countless students, which implies more family relationships will be made (Irvine and Lupart, 2006, 108). Persons with recognised relationships will probably have optimistic self-concept. Schmidt and Cagran (2008) trust that a school age student's self-concept is prejudiced by important people and

social settings. Important people are individuals the student often interrelates with, for instance blood relation, educators, as well as age mates. Mrug and Wallander (2002) settled that compassionate either acknowledged or disallowed by person's age groups influences self-concept. Students who are acknowledged by their age groups feel well about themselves and possess extraordinary self-concepts, as opposite to those turned down by their age groups (Mrug and Wallander, 2002).

2.2.3 Cognitive Behavioural Therapy counselling (CBT)

Cognitive behavioural therapy (CBT) is a real application to cure unhappiness which can aid to increase student's self-concept via therapy. At the core of CBT is a supposition that an individual's disposition is openly connected to his or her values of believed? Bad, inability to function emotionally through rational influence an individual's disposition, intellect of personality, performance, as well as bodily condition. The objective of cognitive behavioural therapy is to aid an individual study to know bad values of believed, assess their rationality, as well as substitute them by means of better thought. Plan of experts who practice CBT is to empower their patients to change bad thought to good thinking (Feldman, and Loebl, 1980).

Exactly when cases of thought and manners are changed, as demonstrated by CBT authorities and examiners, so is expression. Patients are first assessed to acquire a careful history and foundation information to better comprehend the idea of the troubles. Patients will likewise be requested to complete questionnaires. A treatment plan is finished with the patient (and guardians, as suitable) to set objectives and to monitor development. Treatment as a rule happens on a week by week premise. The quantity of sessions fluctuates with the sort of challenges being dealt with. Regularly patients will be requested to enhance particular procedures in the middle of sessions, as they are relied upon to be dynamic members in their own particular treatment. Once the abilities are found out and improved, patients can continue utilizing what they have realized in treatment to approach different issues throughout their life.

CBT is founded on two exact tasks: reasoning reform, in which the psychotherapist as well as participant work joint effort to modify rational habits, plus behaviour start -- in which participants study to overwhelmed problems to partaking in pleasant doings. CBT emphases on the current issues: what and how a person reasons more than why a person reasons that way CBT emphases on exact difficulties. In separate or joint gathering, problematic actions as well as problematic intellectual are recognised, and precisely addressed (Butler and Ruzany, 1993).

CBT is objective concerned with and its approach is educational. The guide uses organised learning experiences that show patients/students to ensure proper conduct as well as put in writing their bad opinions as well as psychological descriptions. The objective is to know how individuals thoughts influence their disposition, performance, as well as bodily state to screen and record their negative considerations and mental pictures. The goal is to see how those thoughts influence their personality, direct, and physical condition. CBT patients are required to have a dynamic influence in their learning, in the session and between sessions in sort of directing. They may give homework assignments at each session which can be assessed at the start and the obligation are studied at the start of the following counselling session. CBT is time limited. Characteristically, treatment with CBT lasts 4 to 6 weeks.

CBT can be a real treatment for delicate and coordinate discouragement in adolescents with low self-concept. Though a comprehensive variety of people respond well to social treatment/directing. Authorities call attention to *the* fact that the sort of individual liable to get the most advantage is somebody who: Is persuaded sees him or herself as ready to control the occasions that occur around them has the limit with regards to contemplation. CBT can be in form of restructuring that is recognizing and changing erroneous negative considerations in students that add to the advancement of his/her low self-concept. For instance, a student who failed in mathematics can be counselled and help the student recognise his/her inaccuracy in mathematics, by asking the student's his/her overall grade in math and counsel such a student on how he/she can improve on his/her performance in mathematics. Students with low self-concept may have involuntary thoughts in light of particular conditions. They are involuntary in that they are unconstrained, negative, and do not emerge of deliberate thinking or logic. These are frequently reinforced by a bad or dysfunctional supposition that is controlling the manner students assess themselves, the condition, or the world around them. Other instances of involuntary rational comprise: continuously rational the most awful is going to occur by overstating the bad features of rather than the helpful.

The thought in CBT as indicated by (Butler and Romany, 1993) is to make sense of how to perceive those negative contemplations and find a more advantageous way to deal with the condition by guiding such person. A complete goal is to locate the fundamental assumptions out of which those contemplations develop and evaluate them. Once the mistake of the doubt winds up self-evident, the patient can replace that perspective with a more correct one. Between sessions, the patient may be asked to observe and record the negative

insights in a journal and to evaluate the condition that called them up, may be students to involve more frequently in pleasant events and grow or improve diagnostic services.

One main issue for individuals with low self-concept is that they stop doing things because they think it isn't justified the determination. In CBT, the expert helps the patient schedule enjoyable experiences, frequently with other persons who can strengthen the pleasure. Portion of the procedure is observing at problems to taking part in that experience as well as determining how to overcome those problems by breaking the procedure down into lesser stages. The meeting investigates with a check on the student's mathematics self-concept questionnaire, which control how the counsellor will set a programme and how the counsellor will counsel the students. Once the programme is set, they revisit the preceding session so they can link to the fresh one. A usual session can lasts 30 minutes by positioning the students into groups amid eight and twelve.

CBT has been used with kids as young as seven to nine years old. It is utmost real with children over 14. At this age, children have more completely advanced reasoning abilities. Younger children, or adolescences and grownups with reasoning incapacities, frequently react best to behavioural plans and organising of the setting rather than an emphasis on thoughtful. CBT is a firm belief supportive the idea that changing bad thoughtful patterns and decreasing maladaptive performance can have a helpful result in refining an individual's feelings as well as performance.

CBT is a goal composed and semi- organised treatment, and incorporates a relationship between the patient and master. Together with the specialist, patients review all factors that led up to and uphold a problematic, including the equivalent relationship of their contemplations, feelings, and practices with others, from family to friends and different people with whom they associate on an ordinary commence. Patients are totally connected with treatment and attract with the therapist in setting short and whole deal goals, surveying how treatment is working for them, and in progressing in making strong and proactive direct to participate in their day to day existences. What do CBT therapists do? CBT therapists' help participants create adapting abilities that empower them to better deal with their views (that is the intellectual part) and their activities (that is the behavioural part).

CBT specialists realize that people with tension frequently maintain a strategic distance from circumstances they fear, and that evasion frequently makes things poorer by both extending nervousness, which leads to low self-concept in school works and creating difficulties over lost opportunities. Hence, CBT therapists enable the participant overwhelmed escaping by slowly facing what is dreaded. For the purpose of this study, CBT

would be used on students by arranging the students into groups between eight and twelve. Inside the group design people figure out how to deal with their nervousness and low self-concept utilizing cognitive behavioural techniques, while picking up help and consolation from (and offering help and support to) other people who are adapting to comparative challenges. All group therapy members reach agreement to privacy before the beginning of treatment through therapy.

Theory of causation

It is the thing that persons believe concerning situation they meet – not just the situation – that make a decision about the way they feel and act. A man's natural science additionally influences their sentiments and conduct a helpful method to represent the part of perception is with the 'ABC' model and DEF show. (Initially created by Albert Ellis, the ABC and DEF models have been adjusted for broader *CBT utilize). In this structure 'A' speaks to an occasion or experience, 'B' speaks to the convictions about the A, 'C' speaks to the feelings and conduct that take after from those convictions, 'D' represents d*ispute of the thoughts (that is challenge the principles, 'E' signifies real fresh opinions as well as views in addition 'F' signifies Emotional state (Fresh).

Here is a case of a 'mental scene', as experienced by a man inclined to dejection who has a tendency to confound the activities of other individuals:

A. Activating event:

Friend saw me in the road without recognising me.

B. Beliefs about A:

He's disregarding me. He dislike me. I'm intolerable as a friend – so I am valueless as a being. For me to be pleased as well as feel valuable, persons must show interest in me.

C. Consequence:

Feelings: upset, unhappy.

D**ysfunctional** thoughtful?

We have understood that what individuals' reason indicates how they feel. What kinds of thoughtful are uncertain for persons? To describe a belief as ridiculous is to indicate that:

1. It hinders a man from accomplishing their objectives, makes outrageous feelings that endure and which trouble and immobilize, and prompts conduct that mischief someone.
2. It goes certainty
3. It comprises pointless methods for reconsidering personality as well as the humankind.

How can a counsellor help student to adjust?

The stages in the process in assisting students adjust can be largely summed up as follows:

1. Enable the participant to comprehend that feelings and practices are caused by beliefs and thinking. This may comprise of a concise clarification took after by task of some reading.
2. Show how the pertinent beliefs might be revealed. The ABC (Clark, D. M. (1997) design as per (is helpful here. Utilizing a scene from the participant's own particular late experience, the specialist noticed the 'C', at that point the 'A'. The participant is requested for to reflect (at 'B'): 'What was I teaching myself with admiration to 'A', to sense as well as transmit in transportation I did at 'C'? As the participant sort's knowledge of the option of irrational thoughtful, this practise of 'filling in the gap' will wind up fewer demanding. Such making might be capable by investigative, establish clarification, as well by record-keeping with the guidance's assistance as well as schoolwork amid periods.
3. Educate the participant how to dispute plus modification the pointless emotional state, replacing them with additional rational alternatives. Once more, advice will inspire the participant. The ABC outline is prolonged to comprise 'D' (Disagreeing unreasonable principles), 'E' (the wanted fresh Result – fresh habits of sensation as well as performing), in addition 'F' (Advance Act for the participant to proceeds).
4. Assist the participant to grow into act. Performing in contradiction of unreasonable principles is a vital basic of CBT. The participant might, for instance, disagree with the faith that condemnation is unbearable by purposely doing something to entice it, to learn that they are truly live. CBT's stress on both reconsidering as well as act create an influential instrument for modification. The achievement portion is frequently approved by the participant as 'homework'.

Process of CBT therapy

Engage participant

The initial stage is to put up a rapport with the participant. This can be attain using the centre circumstances of understanding, affection as well as regard and let the student know at a beginning that change is conceivable and that CBT can help them to accomplish this objective.

Evaluate the issue, individual, and circumstance

Evaluation will fluctuate from individual to individual, however the following are probably the most widely recognized regions that will be surveyed as a major aspect of CBT intercession.

- Begin with the participant's opinion of what is incorrect for them.
- Get an individual as well as societal past.

- Evaluate the rigorousness of the badly behaved.
- Observe some important character issues.
- Examine for some subordinate trouble: In what way does the participant sense about having this difficulty?
- Examine for any non-mental contributing issues: bodily circumstances; medicines; affluence misuse; life/surroundings issues.

Get the participant ready for treatment

- Explain cure objectives.
- Evaluate the participant's inspiration to modification.
- Familiarise the fundamentals of CBT.
- Deliberate methods to be expended as well as suggestions of cure.
- Grow an agreement.

Carry out the cure agenda

The vast majority of the sessions will happen in the performance stage, utilizing exercises like the accompanying:

- Analysing particular scenes where the objective issues happen, discovering the convictions included, evolving them, and creating applicable schoolwork (recognised as supposed recording' or 'sound investigation').
- Emerging social projects to decrease doubts or alter strategies for going ahead.
- Supplementary methodologies and systems as fitting, for example, unwinding preparing, relational abilities preparing, and so on

Assess advance

Around the finish of the mediation it will be vital to check whether enhancements are because of critical changes in the participant's reasoning, or just to a happy change in their outer conditions.

Applications of CBT

CBT has been sufficiently expended to support persons with an amount of scientific as well as non- scientific issues, utilizing an assortment of modalities. Run of the mill clinical applications include:

- Low self-concept
- Depression
- Anxiety issue
- Eating issue

- Habits
- Annoyance controlling
- Desire management illnesses
- Harmful conduct
- Possessiveness
- Sexy misuse retrieval
- Character ailments
- Change to long-lasting well-being problematic, bodily incapacity, or psychological illness
- Discomfort controlling
- Over-all pressure controlling
- Child or teen-age performance conditions
- Association as well as domestic difficulties

2.2.4 Solution Focused Brief Therapy (SFBT)

As the name recommends, it is about being brief as well as concentrating on way out, rather than on problems. Solution focused brief therapy is an approach to manage psychotherapy in perspective of solution-working rather than dangerous thoughtful. The most significant basic establishments of SFBT can be drew back to Gregory Bateson, Milton Erickson and Ludwig Wittgenstein. "It examines current resources and future desires instead of current difficulties and past causes" (Iveson, 2002). SFBT claims that all participants have resources and one of the specialist's assignments is to assist the participant with finding them. Allowing the participant to learn his individual possessions is a rather problematic undertaking since supervision has to be made with delicacy by enquiring clever questions.

We discovered that problems do not occur all the time. The most terrible problems have their period of time to occur and even if they eventually happened one gets over the problems naturally without noticing. At the time when this problems are no more severe or disappear totally, during this period most individuals do many great things which they later upgrade their life with and build up strong self-concept to cope with any situation that may come their way. From this self-esteem, they end up being more determine about their present and their future.

Solution-focused brief therapy (SFBT) is an intercession that can help build participants' motivation because the therapist understand the therapy very well and they

know how to handle the therapy to solve the problems of the participants (Miller and de Shazer, 2000). solution focused brief therapy was established by two social workers, Steve de Shazer (1985, 1988) and Insoo Kim Berg (1994), and contemporaries (Berg and De Jong, 1996; Berg and Miller, 1992; Cade and O'Hanlon, 1993; Lipchik, 2002; Murphy, 1996) in other to help participants.

SFBT essential methods

Lately, the Investigation Group of the Solution-Focused Brief Therapy organization established a usage guide to aid the regulation of the application of SFBT by experts as well as increase cure mode of the model. The leading body of trustees perceived five general components of SFBT:

1. Utilization of exchanges focused on participants' stresses;
2. Talks absorbed on co-growing new ramifications round participant stresses;
3. Utilization of specific techniques to empower participants co-build up a fantasy of a favoured upcoming as well as illustrating on previous achievement as well as assets to assist make up matters proficient subjective study in like manner furthermore orchestrated SFBT with strategies and focus fragments:
4. Thinking about characteristics or arrangements;
5. Objective setting;

Miracle Question

The miracle question is future-arranged and anticipates that participants will conceptualize about potential results. Sklare (2005) saw the marvel question as "seeds of game plans that have been implanted in the midst of the fundamental contact with participants as school therapists take part in solution and target talk instead of issue talk". The miracle question is typically asked in a way like to the following: "Consider how possible it is that while you are resting tonight, the issue you open right now is settled in your rest. While you awake, by what technique will you understand that a miracle has happened and that your worry is handled?" This kind of interrogative inspires target setting in that the reaction to the request empowers participants to perceive changes that they need to happen. The fitting reaction also controls participants to revolve around a positive future and moves the focus a long way from present and past issues to a future solution. Participants may gist

back to issue talk; regardless, Sklare proposed the therapist would then occupy the fixation to the refinement that will occur in participants' lives when the extraordinary event happens.

Exceptions

Exceptions are times when a participant worked better or times when an issue was not as outrageous. A general exception question could be as direct as, "Have there been times when the issue did not happen or was less genuine" If an extraordinary case is recognized, the guide would then focus on the "who what, when, and where" of exclusions rather than the issue.

Coping questions

Copingquestions as inquiries that guide participants revolve around what they have done in that capacity far to survive troublesome conditions. Coping questions summon the thought a long way from participants' terror of issues to facilitating them discover internal characteristics and flexible influences. This framework empowers participants to take their brains off of frustration and puts the thought on what has functioned for them. Participants reframe their undesirable viewpoints to more constructive ones. An instance of a coping questions gave by is, "What have you found supportive so far" Using the coping question technique infers the counsellor regards and qualities a participant's capacity to hold tight disregarding affliction. Recognizing participants have officially found approaches to change in accordance with their present issues gives them inspiration to have confidence in themselves.

Scaling Question

Scaling questions are "helpful technique used to quantify the impacts of an issue on a man's life" For instance, participants are solicited to choose a number from where they are on a size of 1 to 10, where at 1 the issue controls the participant and at 10, the participant controls the issue. Participants are then asked where they should need to be by the accompanying session. Once that inquiry is answered, the advocate asks participants what may need to happen, for example, to get from a 3 to a 5 on the scale by the accompanying session. Most time, not frequently completes a participant reply to a scaling question with a 0 rating. He respond to a scaling question with a 0 rating. He suggested if it did occur, the counsellor must supplement the participant's quality in the guide's office as reflecting want that things will show signs of improvement. Scaling questions can be utilized to recognize

different parts of an issue and its answer. For example, if a participant is encountering a few issues, an alternate scale can evaluate every one. Iveson focused on the scales will cover and help the participant in finding that adjustment in one zone can prompt advance in different regions too.

Task Development Questions

The fifth sort of question respects undertaking advancement and helps participants in setting small, exact goal line that can be proficient and that will empower them to see that new practices will empower them to take care of future issues (Birdsall and Miller, 2002). Discovering solutions that can be actualized in common sense, well ordered styles may prompt fruitful results. This technique, thus, may empower participants to deal with their lives in achievable measures as opposed to trusting they should make 100% progress quickly. Accordingly, utilizing little strides to make progress permits the development of a steady establishment whereupon to assemble achievement. Sklare (2005) noted if participants distinguish special cases to their issues, counsellors can dole out them the assignment of accomplishing a greater amount of what has been working for them. At the point when participants are uncertain about their objectives or are hesitant to make a move, guides can allot them the undertaking of seeing when things are better or to envision their dream is happening one day. Birdsall and Miller (2002) affirmed using these five inquiries offers structure to advising sessions, gives strong terms and cases to the two participants and therapist, and gives an answer for participants to draw upon at the session's end. They furthermore incorporated that inquiries do not have to be asked in a specific sequence, but counsellor knowledge will help in information of when to practise the questions.

Compliments

Compliments help as basic therapeutic gadgets with the usage of SFBT. The perspective of these Authors is that "all of solution- focused treatment is compliments". Regardless of how a session goes, it should end with compliments. Compliments should insinuate specific practices showed by participants. Campbell (1999) built a pattern of five mechanisms they trust as valued in making compliments for participants. These portions consolidate (a) normalizing decrees, (b) restructuring statements, (c) affirmation of participant capacities, (d) a bridging statement, and (e) a between-session proposal. The

writers reminded the student patterns might as well as should be changed to have room for the participants or family members.

(a) Normalising Statements

According to Campbell (1999), compliments give a technique for normalizing the participant's condition. For example, compliments help participants in understanding their experiences or reactions are sensible. This affirmation empowers participants to change their perspectives to one in which they can see an answer exists. Campbell (1999) revealed various participants have perceived the affirmation they were not crazy was to an awesome degree productive to them. The normalizing explanation conveys this perspective by basically giving a declaration of affirmation that it is okay for participants to feel the way they have been feeling given their current condition.

(b) Restructuring Statements

Campbell (1999) delineated the restructuring statement as a gadget that effectively empowers participants to alter their opinion set. For instance, participants may see their conditions in a way that obliges the solution and makes them feel trapped in a situation. Solution-focused therapists use the usage of request to help participants in focusing on recognition with their options. Campbell (1999) prescribed a reconstructing decree for participants stuck at a "troublesome crossing point" might be, "“It seem that you're going through a period of transition in your life, and of course you want to take your time before you make a decision”. This sort of decree empowers the advocate to offer decisions while giving participants the control to reconstruct their perspective.

(c) Affirmations

Campbell (1999) kept up affirmations should be given. The authors announced requests summon participants' thought with respect to their "own particular and social resources" can incite solutions. They similarly harassed counsellors' feedback should fuse the participants' own particular language, characteristics, and viewpoints of their experiences. Campbell (1999) given an instance of a relevant investigation in which an individual was constrained to live with her parents who had reliably been harsh of her lifestyle and her ability as a mother. The advocate complimented the participant on being relentless of her own daughter, converse of how her parents had been of her. The counsellor moreover admitted, "We think your daughter is extraordinarily fortunate to have a mother like you," and kept up

trust in the participant's ability and confirmation to comprehend how to make progress that would be suitable for both participant and young lady

(d) Bridging Statement

The bridging statement is a "bridge" in the matter of what has been talked about and the logical following stage. It interfaces the compliments and assignment part of the message (Sklare, 2005). Campbell (1999) portrayed the bridging statement as going along with anything that can have hugeness for the participant tests, crazy considerations, interests, et cetera. So to speak, the therapist takes the participant's words and empowers the participant to make something profitable of them. For instance, Campbell (1999) prescribed if participants name themselves as suspicious, the therapist may state, "One thing we think about jumpy individuals is they are specialists at watching and have a proposal that will utilize their perception aptitudes"

(e) Between-Session Suggestions

Between-session recommendations identify with homework tasks. Campbell (1999) (1999) planned exercise tasks be kept simple, and be composed by every participant's availability to change. A task might be something as essential as observing when a condition is just a little better. For example, the therapist could request participants make a summary of what happens on a day when things go well. The essential target is to help participants in finding what works best for them. Right when an accommodating development is discovered, participants would be advised to appreciate it more. On the other hand, if something does not work, participants would be advised to do less of the specific development. Campbell (1999) endorsed counsellors consolidate a break as an element of the SFBT session. They concentrated on that the break offers time to impression of focus, structure, and making compliments. Simon and Campbell (1996) recognized the use of a gathering approach in which a gathering is guided in the midst of the break or at various conditions outside the session. Using this strategy, no less than one associates see behind a one-bearing mirror in the meeting room. This procedure empowers the participant to benefit by a joined aggregate undertaking, which may give additional plans to interventions to use with the participant. De Shazer (1985) communicated a watching bunch isn't imperative.

However, he, too, endorsed a break in sessions to give specialists time to consider reasonable interventions or to have the opportunity to guide with a gathering. Sklare (2005) asked counsellors to use a break to create a message to the participant that reflects

compliments and traverse clarifications. Sklare (2005) demanded interfacing clarifications "give motivation to the assignment the student is doled out to accomplish before the accompanying session". In his book, Brief Counselling That Works, Sklare (2005) gave a casing entitled "Manual for Solutions" for use in the main coordinating session. This casing is created especially to compose notes to finish a message. As officially communicated, compliments are key to the SFBT strategy. They effectively give participants an unrivalled appreciation of their conditions and with look for and positive reasoning after a brighter future.

Problem free talk

Solution focused therapists may discuss apparently unimportant beneficial encounters, for example, recreation exercises, meeting with companions, unwinding and overseeing strife. This regularly reveals participant esteems, convictions and qualities. From this dialog the specialist can utilize these qualities and assets to advance the treatment. For example, ; If a participant is self-assured about him/herself it might be that they are certain under life circumstances.

This quality from one portion of their life would then be able to be exchanged summed up to another region where new direct is needed. Perhaps a participant is engaging with their child in light of the way that the kid becomes strong and calls the parent names. If guardians ceaselessly strike back and furthermore gets furious, maybe they can review another aspects of their life where they try to avoid panicking even under pressure; Everyone has common assets that can be used. These may be occasions or discuss companions or family.

Resources

A key assignment in SFBT is helping participants to perceive and deal with their own particular inner capacities, aptitudes and resources; And furthermore their prompt emotionally supportive networks and steady informal organizations. This concentration enables the participant to develop stories as within capable as well as outwardly reinforced. Extending dialect here regularly recognizes better approaches to convey existing resources to hold up under upon current issues. Therapists enable participants to recognize their own specific assets by strategy for scaling questions, issue free talk, and in the midst of exception pursuing. Assets can be Inner: the participant’s aptitudes, characteristics, potentials, feelings that are important to them and their competences, or Outer: steady connections, for example,

accomplices, and family, companions, confidence or religious gatherings and furthermore bolster gatherings.

Since its change in the mid-1980s these middle parts of SFBT have been associated with a broad assortment of issues including adolescents and youth including crisis objective setting and resulting treatment. The situation of exact, real, and sensible objectives is an essential section of SFBT. Objectives are characterized as well as improved through SF discourse about what participants require unmistakable later on. In this way, in SFBT, participants set the objectives. As soon as a commencement arrangement remains set up, treatment bases on unique cases related to targets, reliably scaling how close participants are to their objectives or an answer, and co-developing helpful following stages to achieving their favoured fates.

Evaluate each session:

"Is our effort organised supportive to you? Are the progressions along the lines that you trusted? Have your objectives changed? What should we be doing otherwise?" During every session, ask the participant (on a 0 to 10 scale) what number will mean all around ok issue determination after an objective is accomplished, define extra objectives or end the mediation, remind the participant toward the finish of every session how progress close objective accomplishment is being illustrated

2.2.5 Students' Motivation

Students' Motivation to learn implies the cognitive and emotional mental methods that effect the knowledge of all topics imparted in school (Slavin, 1997).This inner procedure initiates, monitors and keeps a student's conduct over period of time (Schunk, 1990). Mwangi and McCaslin (1994) stated that motivation is a mental procedure that provides determination, way as well as strength to performance and that it is largely accountable for discrepancy effort production. It drives and guides beginners to involve in academic actions as well as controls how much is well-read from such events, and from extra info bases to which students are exposed (Slavin, 1997; Tuckman, 1992).

Inspired students are talented to use advanced cognitive procedures to study, fascinate and recall further from the subject (Graham and Golan, 1991). They endeavour to comprehend the topic matter, progress performance, pursue trials and continue at tasks even during disappointment (Woolfolk, 1990). Through teaching, a teacher's duty is to learn, pledge and put up with students' incentive to study and to inspire them to involve in book learning undertakings (Slavin, 1997). Motivation to acquire might be intrinsic or extrinsic

(Biehler and Snowman, 1997; Deci, 1991; Good and Brophy, 1995). Persons with intrinsic motivation react to inner wants like individual attention in a subject, fulfilment or pleasure in a learning task that is naturally stimulating despite the fact that individuals with extrinsic motivation react to outward compensation. Such compensations comprise a teacher's commendation and authorisation of their contribution in a lesson, reassurance and optimistic response on task presentation.

The four scopes of inspiration to study (Burden, 1995; Horn, 1995) are interest, importance, saw likelihood of achievement, anticipation of progress or certainty, and contentment. Interest excites a student's inquisitiveness to learn, react and take care of topic, while pertinence is the degree to which students see topic substance to be noteworthy and profitable to them. If they view the material as significant, they will attempt to learn it. Seen likelihood of progress, anticipation of achievement or certainty is the students' apparent probability of accomplishment through their own control of their conduct. Students will invest more energy to take in the material in the event that if they are sure they will make it in such subjects

2.2.6 Socio-Economic Background

Student's background in connection with the way they perform in their school works has been a thing of interest for sometimes now. Investigations on some studies confirmed it that the type of home a student comes from determines his/her performance in school mathematics (Bos and Kuiper, 1999; Brese and Mirazchiyski, 2008; Chiu and Xihua, 2008; Lamb and Fullarton, 2000; Marks, 2006).

Schooling is the greatest inheritance guardians can offer for their children. The advancement of the nation instigates from the household. At the point when the family prevails with regards to educating and upsetting great qualities in their children, the nation advances as a abode to live. It is by and large trusted that for any nation to develop the home must be a perfect one. When the household gives good values to the children it helps in the development of the nation both morally and economically.

Many reasons have been known in numerous investigation studies to be accountable at the incessant deteriorating of our learning scheme. Numerous issues like classroom size, deprived teacher-student ratio, insufficient instructional resources, approach of educators to work as well as non-existence of seriousness in the students. Through the obtainability of extra capable educators, better-quality skill and amenities used for education and knowledge, instructive organisation in Nigeria is yet to meet up with the normal standard. Some students

are remarkably decent in their effort, whereas some tremendously bad. Once such differences in totals are outlined it is revealed that the kind of home-based the student comes from is a key allied effect. It is so imperative that the altitudes of such aids and the consequence they participate on children stand to be reviewed so that valuable counsels to Parents, teachers, educational organisers and administration might be prepared. Orhungur (1990) declares that the ethnic upbringing of the household is strong-minded to a great level by its socio-economic background. As the child matures and moves out to the broader civilisation his/her communication with it as well as insight of it are mostly strong-minded from her previous, involvements at home. The domestic setting and its mixing effect improve the character of the child.

Nigeria, for example is a civilisation with varied cultural collections with numerous ethnic upbringing in regions such as family size, job as well as in extreme cases, belief. These issues posture their individual limits on educational education of children. The community session or manner of settlement of the household as well as extended family organisation might similarly effect the educational routine of a child as well as by extension, their educational background. Inspiration is the greatest essential in order to do more professionally in their part of effort. Once positive issues remain outstanding in a child's family background, it is obvious that the child will be interested and determined in the direction of great educational objective.

Denga 1986) in Eyake (1997) recommended that commendations, motivations, and additional procedures of recompense scheme must be working by way of motivational issues to rouse students to advanced attainments. It is possible that the abundant a child attains throughout his school existences is mainly reliant on the caring of household to which he/ she fits. For example, a kid whose parents take a countless transaction of attention in what he/ she does at school and give him / her essential provision by giving all the obligatory books and moneys wanted has a countless benefit over a child whose parents do not give him this benevolent of motivations and reassurances.

Additionally, students' approaches to knowledge and instructive acts are formed by the type of incentives obtainable to them by their numerous surroundings. This can be measured in relations to the kind of household, the home-based, parent social positioning, learning level, job to mention but a few. It is thus, obvious that students' performance is depending on the incentive the home bargains.

Educational childhood is not unrelated through the domestic effect of a child. Separate associates of the family help as an ideal to the child as he/ she copies from each of

them Eyake (1997). Adeyeme (1977) perceived that if the family is unsuccessful to offer the child with the essential tools to appropriate him/ her into his/her good abode in the world and directed correctly for his/ her upcoming profession, at that moment the child is injured. An investigation of the fraction of secondary school failure today involves that such students are typically from shattered families, connecting polygamous household or through additional socially associated difficulties. The agricultural and big families have accounted for the polygamous lifetime of individuals. The big the proportions of the family, the more financial and extra societal tasks the parents take along upon themselves. In addition, the educational act of students from that of family agonise grave hindrance. This is the reason such parents might not be capable to have enough money for the backing of schooling intended for the children. Additional issues might have emotional impact on the education enactment of students similar to parting on grounds of dissimilar employed position, split-up between both parents or even normal demise can take adverse consequence on the development and progress of an adolescent.

Besides, monetary situation of guardians is one of central point that can impact incredibly the instructive background of a child. In many families, either or none of guardians might be receiving salary sufficiently adequate to support the family, faced with malnutrition and other emotional and psychological effects, the psychological advancement of the child would be extraordinarily hindered. Orhunger (1990) includes that a low wage family with a lot of encouraging issues may deliver adolescents who physical and mental advancement postures genuine difficulties to the school's determination at ideal improvement of the child.

Ononuga (2005) specified that the kind of job a parent do would define his revenue and his social position. According to Ogunshola and Adewale (2012), parents of diverse profession group repeatedly have dissimilar method of child raising, dissimilar habits of punishing their children as well as diverse habits of reacting to their children. These changes do not precise themselves reliably as predictable in the circumstance of each family; moderately they effect the average tendencies of families for dissimilar work-related classes (Rothestein, 2004) mainly since a high work-related class or respected professions have a habit of encouraging financial assets or possessions, gifts a basis of safety by given an amount of a family's skill to meet crises, engage financial blows, or deliver the incomes to living securely.

Though it has been postulated by earlier literature (Meyer, 1993; Ogunsola andAdewale, 2012; Osunloye, 2008; Schulz, 2005) that parent's socio-economic background effects children' academic act in school; on the other hand, self-motivation can help or affect

these variables' relationship badly because a student from a decent parental socio-economic background might not attain high academic performance if he/she is not strong-minded to work hard.

However, Ogunsola (2012) in his study says, socio-economic as well as education background of parents is not important factors in students' performance. Therefore, one can be motivated by individual drive or wish to attain achievement. Other studies (Udida, 2012) contended that kids from wealthy family evidence poor academic performance in schools.

2.2.7 Student's Career Aspiration.

Current age is the age of rivalry and accomplishments; along these lines, education has a huge part to play in propelling the students achieve higher and to have the useful longing in most of their doings especially at secondary phase of schooling. The students need to understand their abilities and to have the self-examination in different issues. It is along these lines that the adolescent at the secondary level of training has built up a self-concept whereby he plays out the entirety of his exercises in understanding to this learning of self.

Allport (1961) has defined the self-concept as, "something of which we are directly conscious, we reason of it as the sincere, vital reserved area of our lifetime, as such it shows a vital part in our awareness (an idea wider than self in our character as well as in our creature). It can be established that self-concept is the whole of all that the individual can call "I" or "Me". It refers to those insights, principles, emotional state, attitudes plus standards which the individual views as portion or features of himself. It denotes to person's insight or opinion of himself. It comprises the individual concepts as well as assessments around his bodily skills, look, intelligent capabilities, social talents, mental self- appearance, self-assurance, self-esteem also self- sufficiency. We see that self-concept regulates not only the types of objectives as appropriate for a student to endeavour for, but likewise his level of ambition.

The term level of desire was first utilized by a German psychologist that is Hoppe (1990). There are diverse tasks on the planet, that distinctive students do, or there are diverse assignments that they want to do. The standard that they need to accomplish in any task is portrayed by psychologists as their level of goal. Frank (1935) characterized level of ambition as, "level of future performance in a conversant job which an individual, knowing his level of previous act in that mission, openly assumes to grasp."

Hurlock (1967) characterized it as "an aching aimed at whatever is beyond one's attained level through progression on it as its conclusion. As it were, desire implies the objective an individual sets for him/herself in a task, which has extraordinary individual

hugeness for him or in which his self-image included. “There are three parts of student life which together drive the student's normal future as a fruitful individual: assurance to accomplish their wanted objectives, confidence in their ability to reach these destinations and capacity which would coordinate these objectives. In this study, these three perspectives will be mentioned to individually as, Self-Concept and Achievement. Conceptualisation of goals by Quaglia and Cobb (1996,) is "a student’s aptitude to classify as well as established aims intended for the yet to come, however being encouraged in the present to move in the direction of those objectives". This build of desires has two noteworthy underpinnings: motivation and aspirations. Motivation reproduces that an action is energizing and charming to the individual and the consciousness of being completely and luxuriously associated with life at this very moment.

A person with a high state of motivation is one who trusts an action is valuable and pleasant. Determinations signify the insight that an action is significant as a resources to upcoming objectives. It reproduces persons' insights that it is equally likely as well as needed to reason in upcoming positions as well as to plan for what's to come. How does the school environment affect student wants? What conditions seem to influence modifications in the mode students interpret the work they do in school and the objectives they established for their future? Aspirations are qualified by involvements of accomplishment and disappointment and by social pressures to aim extraordinarily as well as get something done perfectly. Social comparison theory points to cultural standards which bear down upon these aspirations, pressuring students to conform and placing a ceiling upon them. For a child to vision in such a new idea, but how routinely do we as educators encourage students to vision, yet oversee the determination it will take in the moment to comprehend those dreams? (Quaglia and Cobb, 1996).

Career aspirations of young people should be an extensive significance to all therapists. It isn't sufficient to have the correct state of mind and the best tertiary selection test score, if the student is inadequate to getting to encourage schooling and occupation. In relation to aspirations, research that has included financial status and specifically looked at the impacts of confidence and academic self-concept on career aspirations originate that academic self-concept had directly affected the two sorts of goal and furthermore intervened the impact of classroom condition on these desires. Why does a similarly capable individual with comparable capacities and early preferences settle on various academic decisions, and why some of them finish up in poorer paying jobs and livelihoods? For being talented to

comprehend and alter one's educational as well as career selections, it is vital to know what controls his or her ambitions.

Though, desires are strong-minded now in initial childhood and are likely to modifications through the lifetime. Besides, occasionally high career ambitions are not suitable to ensure a healthier outcome. This occurrence exists because of aspiration-expectation breach, when one's required objectives do not agree with the normal result because of the doubt to victory. This example is particularly seen amid ladies and certain ethnic groups. It isn't just critical to look at the level of career aspirations, yet it is likewise fundamental to inquire as to whether ones' desires are constantly satisfied. It is trusted that student profession desires are the most applicable variables deciding one's future career.

On the other hand, to be able to grasp the aimed objectives it is likewise very helpful that individual takes an extraordinary self-assurance in his responsibility. It was revealed that educators and parents take the aptitude to effect one's self-concepts what in turn centrals to advanced or subordinate level of academic prospects of that person. The implication of self-concept on one's instructive potentials have been fervently considered in the literature (Bandura, 1994; Lent and Brown, 1996; Nauta, 1998; Brown and Lent, 2006); it has been recognised that person's self- concepts have an important position in endorsing hopeful results as well as decreasing the probability of undesirable consequences (Oyserman, 2006; Destin and Oyserman, 2009). Students who have great self-concepts are ordinarily creative, well-organized as well as self-assured around their acts than their mates with the similar aptitude but inferior self-concepts. It has been likewise revealed that they place additional energy as well as more focussed on the job than others, and they are further dedicated to their objectives. So, those by means of great self-concepts do well and based on improved results have advanced upcoming educational, career beliefs as well as career Aspiration (Brown and Lent, 2006)

2.2.8 Students' Achievement in Mathematics

While investigating students ' principles about math and their mathematics attainment, it is valuable to distinguish exactly how powerfully the child attaches myself and mathematics (a confidence around the personality; probably "I classify by math"), which can be called a mathematics self-concept. Agreeing to Wong (1992), mathematics achievement is carefully connected to self-concept as well as boldness to mathematics. By way of the circumstance of the over-all confidence, additional mathematically self-assured students have meaningfully advanced marks on a consistent extent of mathematics calculations. Osang

(1990), in his study, verified the association amid students' act in mathematics and self-concept. He establish that students' act in mathematics rest on their mathematics self-concept. That is, their attainment in mathematics is influenced by what they supposed of or alleged around themselves, with situation to mathematics as a subject.

In a study led by Byrne (1984), he brings into being that association amid students' self-concept in Mathematics and their Mathematics Achievement is reasonably and unavoidably linked. Byrne stated that attainment in Mathematics is extremely connected to what an individual reasons of Mathematics. That is, one's Mathematics self-concept will effect ones attainment in Mathematics. Similarly, students' self-perceptions of mathematics aptitude effect their mathematics achievement, as well as their boldness to mathematics throughout high school takes optimistic possessions on their selecting professions in science and mathematics. The National Council of Supervisors of Mathematics trusts that in order to aid students study stimulating, standards-based mathematics, teachers must set up a classroom atmosphere that advances positive self-beliefs/self-concepts about knowledge and academic capacity. We trust that teacher activities can fundamentally influence students' self-principles/ideas and that as these student self-feelings/thoughts extend and build up teacher principles do as such too.

Numerous students are not sure about their numerical capacity to take care of issues. A poor state of mind to the discipline is supposed to affect beginners at each level of education. The anxiety of both solving mathematical problems in class as well as /or taking mathematical studies has been considered by Marsh, and Hocever (1985) and Stodolsky (1985), and both revisions establish harmonious uniformity outcomes that doubts of Mathematics frequently intensifies to a level called mathematics worry by the result of deprived attainment in Mathematics. They resolved that persons with pitiable approaches to mathematics are frequently testified to have a little self-concept as well as spirits of ineffectiveness. This assertiveness is recognised as self-decrease comments as well as a continuous absence of achievement in Mathematics.

Agreeing with Wong (1992), mathematics achievement is thoroughly connected to self-concept as well as boldness to mathematics. Such as in the situation of the over-all confidence, additional mathematically self-assured students have meaningfully upper marks on a standardised degree of mathematics calculations. Osang (1990), in his research, verified the association amid student's act in mathematics as well as self-concept. He brings into being that student's performance in mathematics is determined by their mathematics self-

concept. That is, their attainment in mathematics rest on what they supposed of or assumed around themselves, by way of situation to mathematics as a subject.

2.3 Empirical Review

2.3.1 CBT and Mathematics Self-Concept

The significance of treatment, for instance, cognitive-behavioural therapy on the improvement of self-concept to boost mathematics self-concept cannot be over emphasised. Students who are capable and talented in mathematics and science are exceptional people who bring a change of qualities and individual attributes to the educational condition. Individual/ group counselling has been prescribed as a standout amongst the most coherent encounters to advance self – information and to help self-concept grows in all students' academic works including mathematics. There are two unintentional preconceptions that might disturb scholars as they contemplate about their possible professions in the mathematical sciences: (i) that jobs in mathematics are merely for persons by means of exceptional mathematics potential, and (ii) that numerous demographic issues (like, sex and civilisation) determine mathematics accomplishment as well as suitable profession decision. Treatment can be given to such students by counselling them on how to reduce these inadvertent biases encourage them to be more focused in the subject. Treatment can also be given to the teachers, by counselling them on the most proficient method to basically inspect their relations with students and enable them to give chances to all students in their science subjects (Davenport, 1994). This, in turn, can impact student perspectives to mathematics, and furthermore students ' principles concerning their abilities to achieve in mathematics, and in addition students' beliefs with respect to their capacities to accomplish in mathematics, which can improve their mathematics self-concept.

Therefore, since the unhealthy self-perception can affect different educational and non-educational aspects of these children including their performance in mathematics, working in order to increase and improve their self-perception in form of given treatment to these students by counselling them can assume a noticeable part in growth and divulgence of their capacities as well as aptitudes. One of the intervention methods in this field is the therapeutic cognitive-behavioural intervention. The purpose of this intervention is to challenge the ill-advised beliefs and strengthening problem-solving and social competence abilities by counselling these students in order to boost their self- assurance in mathematics. A review on recent cognitive-behavioural studies in children and adolescents represented that given treatments to these students by counselling them will give stable improvement in

children as well as adolescents. For instance, Raeisi (2007), in a survey studied the efficacy of cognitive-behavioural therapy on mathematics problem solving performance in female fifth grade students with mathematics disorder in Yazd, showed that there is an imperative qualification amid the mean marks of mathematics critical thinking in experimental and control group that is those that received treatment/counselling and those that did not. Generally, cognitive-behavioural group therapy can be applied as a viable therapeutic method for the students with mathematics disorder.

2.3.2 SFBT and Mathematics Self-Concept

Solution focused brief therapy treatment in form of counselling can aid decrease the preconceptions which students might consume about mathematics by counselling them either in groups, or individually, by utilising a procedure of intercession that spotlights on general abilities and states of mind, profession instruction, and mathematics. For instance, counsellors can organize exercises that attention on abilities and approaches identified with mathematics. School counsellors also can counsel the students on how to address confidence, self-assurance, and self-worth, rise their basic leadership aptitudes and their capacity to generalise critical thinking abilities to different sorts of difficulties and positive attitudes towards mathematics in order to improve their mathematics self-concept (Fouad, 1995).

Studying learning disorders among secondary students has been the field of interest among researchers. It is possible for gifted students to have unhealthy self-perception in mathematics due to the gap between learning problems and their exceptional cognitive ability. Riding on the bandwagon of the cognitive revolution, self-theorists conceptualised the self as a cognitive construction that is quite functional in bringing organisation and meaning to one's experiences (Rader, 2011). Self-perception mentions toward the person's feelings and cognition of him/herself in addition to their interaction (the person's thought and emotional state) in mutual result as well as regulating to the person's about realm. It is likely for the children with learning low self-concept in mathematics to feel numerous setbacks to attain faster deficiency in observing their qualities whilst comprising compared using their friends with great self-construct in mathematics. This earlier shortage most perhaps is the battle as well as disappointment in circumstance of constant learning difficulties (Jordan, 2004).

Kaminsky (2007), in his examination inspected the viability of an improvement program on educational self-perception in male and female gifted students with learning disorders who were culturally different. The results indicated a constructive outcome of

intercession on the expansion of the students' feelings regarding their abilities in school and on their mathematics self-concept. What can be concluded from most of these studies is the fact that the solution focused brief therapy group therapy intervention like counselling students with low mathematics self-concept yielded positive results on the students' mathematics self-concept.

2.3.3 CBT and Career Aspiration

Aspirations are what children and adolescents would like to accomplish for themselves later on. Raising goals is regularly accepted to be a compelling method to motivate students to work harder to accomplish the means important for later achievement. Various ways to deal with raising aspirations have been tried through three comprehensive areas:

1. Interventions that emphasis on guardians and families;
2. Interventions that emphasis on educating practice;
3. Out-of-school Intercessions or additional curricular exercises, at times including companions and tutors.

Preferably, counsellor should direct career instruction exercises starting in grade school. At the point when students begin thinking about their careers in primary school they will probably have better learning of their own advantages and in addition what career decisions are open to them (Battles, Dickens-Wright and Murphy, 1998). Szymanski (1994) confirms that career creating must remain observed by way of a whole deal, continuing career oriented process and one time, word related decision methodologies ought to be maintained a strategic distance from (Skorikov and Vondracek, 2007). At the point when students are more mindful of their career advantages they would then be able to interface their secondary school lessons and undertakings to their vocation destinations (McEachern and Kenny, 2007).

Constructive profession advancement does not just influence a person's vocation design, it is likewise connected with constructive viewpoints other than career improvement. Research proposes that fruitful job advancement definitely influences one's emotional well-being and feeling of prosperity (Herr, 1989). Furthermore, a scope of useful results goes with positive career improvement. Positive profession improvement is a mix of perfect career and school perspectives joined with optimistic acknowledgments in particular aptitude to win at a picked profession and influence self-contentment (Skorikov and Vondracek, 2007). Once students are absolutely upcoming oriented as well as working to an objective they are possible to understand optimistic side effects in other aspects of their lives (Nurmi, 1991).

Optimistic career direction is realised as a feature in establishing fruitful change and is related by disconnection from different performance (Skorikov and Vondracek, 2007).

Profession indecisiveness is a common progress in the occupation change procedure for particular persons. Some are able to experience profession indecisiveness and move on whilst others are harmfully influenced by the phase (Skorikov, 2007).For some, career indecisiveness is only a phase in the profession developing procedure and isn't ran with undesirable responses (Skorikov, 2007). On the other hand, for others, it is a troublesome progress in the profession change process. Lengthy career indecisiveness can be related with worry, unhappiness, low self-esteem/concept, instability as well as low life contentment (Creed, Muller, and Patton, 2003).

2.3.4 SFBT and Career Aspiration

A meta-analysis led by Lapan, Aoyagi, and Kayson bring into being that far away in 1958 investigation has revealed that students that obtain solution focused brief therapy direction from a school therapist in respects to career development are prosperous post-graduation (2007). Additional new investigation has revealed that full career growth accomplishments in high school are co-operative to students with the transition out of high school. Lapan, Aoyagi, and Kayson (2007) presented a three-year lengthways school-to-career education using twelfth grade students in a rural location. The revision assessed the consequence of career growth undertakings that existed by the School-to-Work Opportunities Act (STWOA). Students likewise established expressive as well as contributory provision whilst organising to create a post high school changeover. Outcomes of the training revealed that ambitions to go to school or advance educational preparation were connected to six abilities that are drew in the Integrative/Contextual Model of Career growth. The six capacities that were well-known as real seem to be: (1) create constructive self-concept, self-adequacy desires, result desires, and career improving attributions; (2) investigate alternatives and grow actually significant objectives; (3) improve the apparent fitting amid the specific as well as the realm of effort; (4) assimilate effort willingness deeds as well as pro-social services into daily activities; (5) recognize career methods for intrigue; and (6) end up effective scholars and self-coordinated, enduring students . Students that used these six capacities stated emotion contented with enlightening knowledge as well as with their outside stages past high school (Lapan, Aoyagi, and Kayson, 2007).

Profession growth programming is related to definitely improving student approaches to schooling as well as growing schooling appointment (Kenny, 2006). As students study about as well as walk around careers, they are talented to narrate school to their upcoming

career objectives in addition they are further expected to rate school. Moreover, occupational tactics as well as awareness of likely career prospects can aid students' discovery determination as well as chance in training that they might not have understood without occupational ambitions. Kenny (2006) to establish that the sophisticated the smooth of career strategies as well as potentials the more involved in school the student is.

Parents act a big part in their children' career growth. Parents are significant part replicas for their offspring (Morrow, 1995). Numerous Parents understand facilitating their offspring grow their career welfares as a significant part of childrearing (Young and Friesen (1992). Downing and D'Andrea (1994) originate that though numerous parents understand assisting their children grow their career welfares as an energetic purpose of their parts as parents they similarly experience stranded as well as ignorant around their child's career supervisory procedure. Numerous Parents are uncertain of what is real after it arises to career growth. Bardick, Bernes, Magnusson, and Witko (2005) directed a study to absorb further around parent insights of their part in their child's profession growth procedure.

For the most part, the confirmation base on goal is extremely frail. More thorough investigations are required, especially concentrating on student level instead of school-level interventions.

2.3.5 CBT and Students' Achievement in Mathematics

Mathematics continues to be a root of frustration, confusion, and perplexity for students of all ages, but primarily in middle school as the concepts intensify and increase in complexity. Teachers are faced with the pressures of adequately preparing students for strict tests and addressing required standards which have become part of the curriculum, on top of keeping students engaged and motivated. This becomes an area of even greater focus when students with mild disabilities, other service delivery models, and intervention specialists are considered. How does the intervention specialist, along with specific intervention, impact student attitudes and achievement in mathematics and standardised tests?

Mathematics is used in everyday life in a multitude of ways. From the beginning of grade school and proceeding through secondary school and beyond, mathematics plays an essential part in the curriculum. Aside from its importance in the classroom, Leinwand (2009) believes, "the dialect of science is worldwide. The subject rises above social limits and its significance is all around perceived"

Mathematics is a cumulative subject that consistently builds upon prior knowledge. A strong foundation, as well as continual fostering and reinforcement of skills is critical for success inside and outside the classroom. According to a study completed by Cleary and

Chen (2009), elementary and middle school students' inspiration and achievement in mathematics is reliant on their genuine interest in the subject. With state tests, unpredictable weather, and various levels of abilities among students, teachers are faced with the constant stress of preparing their students as thoroughly as possible for the standardised state tests and for the following school year. Additionally, students' level of interest is often at the origin of their academic success (Schifter, 1996). The importance placed upon students not only learning, but understanding mathematics, schools may go to extensive means to be sure to reach each student when teaching mathematics.

For students who have specific learning disabilities or developmental disorders that impede their ability to keep up with their typical peers, teachers often collaborate with intervention support specialists to best serve their students. The role of the intervention specialist is to adapt the general education curriculum to students' abilities and needs, which should be done in a range of methods. For instance, an intervention specialist might counsel the students alongside the general educator or conduct a smaller class, outside of the general education classroom for students with educational needs, typically known as "pull-out" instruction. This form of instruction is meant to benefit the students because of the increased one-on-one attention from the intervention specialist, fewer distractions than the general education classroom, and material can be taught at a slower pace because there are fewer students. Additional supports offered by the intervention specialist include adapting assignments by shortening the number of problems, instructing for a more drawn out timeframe than would be possible for the general education teacher, providing guided notes for the students to follow along, or providing additional time for students to complete work. Ultimately, students with low self-concept may be more responsive to this intervention.

The part of the intervention support specialist, impacts students' achievement on their unit assessments, as well as their attitudes toward mathematics in general. How does the intervention specialist, along with specific intervention, impact student achievement in mathematics and attitudes? Middle school marks an integral time in students' experiences in learning mathematics, as well as in teachers' roles of teaching mathematics. Teachers are faced with the responsibility of addressing and attending to the challenges their students face in the transfer from basic to middle school mathematics (Schielack and Seeley, 2010). In order to foster their students' needs regarding the challenges related with the change to middle school mathematics, Schielack and Seeley suggest teachers' pay special attention and care to their instructional strategies, materials, and work expectations in mathematics class. Most notably, teachers of middle school mathematics should be ultra-sensitive to students'

anxieties toward mathematics, as well as be incredibly mindful of the parent-teacher partnership in mathematics, and across content areas (Schielack and Seeley, 2010).

Changes in work expectations in middle school mathematics compared to elementary mathematics is an incredible challenge for most students to get used to and essentially, a root of stress (Schielack and Seeley, 2010). Moreover, middle school mathematics, particularly 7th grade mathematics material, introduces an entirely new vernacular of language and terms for students to learn and have the capacity to utilize and get it. Notwithstanding new language and terms, 7th grade content varies from that of previous grades in intensity, concept load, and level of mastery. Undoubtedly, it is common for students to respond to the 7th grade mathematics curriculum with frustration and disinterest. Teachers can address this through various methods of instruction and by realising their students may prefer different styles of teaching and teach (Thomas and Brunsting, 2010). Unfortunately, given state standards and high stakes assessments, teachers are faced with the discouraging task of addressing state standards while catering to the individual needs of their students.

2.3.6 SFBT and Students' Achievement in Mathematics

Being capable in mathematics is an essential ability forever. Intervention like solution focused brief therapy is being accommodated students across the country who perform underneath essential on different evaluations. In Robert Frosts (1960), "Disclosure" Robert Frost talks about the propensity of people to conceal their actual personality from others while in the meantime trusting that somebody will discover them out. "In the event that no one but students could disclose to us where they are." "without such an exposure, the educator needs to run through the evaluator's skill: ascertain what the students acknowledge as well as what they know how to sort out as well as guide individually to the subsequent rising stage" (Scherer, 2014). Presently the teacher needs to make sense of an approach to get up to speed with these students while holding fast to the thorough new benchmarks.

Teachers today resemble tight-rope walkers without a security net, in charge of addressing the requirements of each student, with no place for mistake ((Buffman, 2010, pp. 10). Students who graduate today have a better than average plausibility of living in the world-wide market, while other individuals who miss in school are a greater danger of insufficiency, wellbeing, or an early death. The pressure is on for educators to deliver the vital services desirable to endure in today's civilisation.

Why mediation? The explanation behind SFBT (Solution Focused Brief Therapy) is to help struggling children before they fit for distinct education. Schools ought to give interventions to students when they exhibit the need. Educators resemble detectives who

"search for pieces of information about student's learning advancement and like specialists, they utilize analytic tests to analyse appropriate treatment alternatives (Scherer, 2014). Teachers break down evaluations to demonstrate students where they are in association with aptitudes and cognizance. "Most strength learning models weight the centrality of administrating a fast and concentrated on pre-examination to all students beforehand beginning heading to choose in the event that they have the basic data and aptitudes for achievement in the cutting-edge learning course of action" (Guskey, 2010).

Amid mediation, therapists monitor at-risk students the more frequently to evaluate the suitability of instructional changes. This programme advance monitor to decide the adequacy of the educator intercessions, and whether students are advancing adequately to meet year-end objectives.

2.3.7 Motivation and Mathematics Self-Concept

Psychologists consider that motivation is a essential element for knowledge (Biehler and Snowman, 1986). Acceptable school learning is not likely to take place in nonexistence of adequate motivation to learn (Fontana 1981). Denhardt (2008), defined motivation as "what causes persons to act as they do" Lawler (1994) said "motivation is objective focussed". Motivation summarize the attainment and detection of objective (Denhardt 2008). Pettinger (1996) defined motivation as environmentally dependent. Campbell and Pritchard (1976) defined motivation as being the set of mental procedure that cause the commencement, way, strength, and determination of performance. Denhardt, Denhardt and Aristigueta (2008) outline motivation is not: openly visible, the same as contentment, at all times aware, and openly controllable.

Denhardt (2008) dispute that motivation is not openly visible. Motivation is an inner condition that causes individuals to act in a exacting method to achieve exacting objective and reason (Denhardt, 2008). Motivation is not openly controllable: motivation is not something that persons perform to others and motivation happen inside individual's mind and hearts (Denhardt 2008). Motivation is not the same as contentment: contentment is past oriented, while motivation is future oriented (Denhardt 2008).

Scientists consider that motivation is an essential element for knowledge (Biehler and Snowman, 1986). Acceptable school learning is improbable to come about in lack of adequate motivation to study (Fontana 1981). Denhardt (2008), outlined motivation as "what grounds persons to act as they act" Lawler (1994) supposed "motivation is objective absorbed". Motivation plans the attainment as well as search of objectives (Denhardt 2008).

Pettinger (1996) clear motivation by way of globally in need of. Campbell and Pritchard (1976) clear motivation by means of being the established of mental procedures that source the start, way, intensity, as well as perseverance of performance. Denhardt, Denhardt and Aristigueta (2008) drew motivation is not: openly noticeable, the alike in place of gratification, continuously aware, as well as openly manageable.

Denhardt (2008) contended that motivation is not immediately noticeable. Motivation is an inner express that drives persons to act in a specific manner to achieve specific destinations as well as aims (Denhardt, 2008). Motivation is not at once manageable: motivation is not somewhat that persons fix to others as well as motivation happens inside masses' attentions as well as emotions (Denhardt 2008). Motivation is not the similar as atonement: atonement is former adapted to, whereas motivation is future atonement (Denhardt 2008).

The Self-affirmation theory perceives different sorts of motivation on the unmistakable reasons or destinations that offer rising to a movement (Ryan and Deci 2000). The Self-affirmation speculation perceives three sorts of motivation, which are intrinsic motivation, extrinsic motivation and a motivation (Ryan and Deci 2000).

Intrinsically motivation, happens once the action is complete on view of the permitted select of someone (Ryan and Deci 2000). Intrinsically motivated actions are gotten once there is no another seeming reinforcement apart from the action this one (Deci 1985). Malone and Lepper (1987) found out intrinsically motivation by way of what persons commit to do minus outside encouragement. Fincham and Cain, (1986) observed intrinsically motivation by way of designs that have constituted related through extraordinary apparent aptitude as well as ascertain, truthful job studies as well as preparation as well as the confidence that attempt gains one's skill as well as assure.

Agreeing to Ryan and Deci (2000), extrinsic motivation is a concept that is pertinent when an action is complete in order to reach about prize. Extrinsic motivated conduct is those where the assuring device is effortlessly understood (Deci 1985). An external direction to acquiring is categorised by have to do with outside motives for functioning, suchlike the ruling of others concerning one's carrying into action, marks, or some expected reinforce (Goldberg, 1994).

In the Self-decision Theory, the investigators projected amotivation as one of the categorisation of motivation. A person is amotivated, after his/her behaviour absences deliberateness (Ryan and Deci, 2000). Amotivation is in numerous high school students and such students are not motivated in well. In a study encompassing more than a few area

educations as well as workroom experimentations, Boggiano (1992) exposed that accomplishment motivation definitely prejudiced theoretical presentation. It was bring into being that motivational predilection anticipated children's consistent attainment marks (Boggiano et.al 1992). Children by an intrinsically motivation preference had advanced understanding as well as mathematics marks as well as sophisticated general attainment marks likened to their external vis-à-vis (Boggiano et.al 1992). There is an important association amid educational attainment as well as motivation (Sikwari 2014) besides motivation has influence on school success of secondary school students in mathematics (Tella 2007). Extremely motivated students did well intellectually than poor motivated students (Tella 2007).

Motivation to acquire can be intrinsically or extrinsic (Biehler and Snowman, 1997; Deci, 1991; Good and Brophy, 1995). Persons by intrinsically motivation react to inner needs like individual attention in a subject, gratification or pleasure in a knowledge job that is built-in them whilst individuals through extrinsic motivation react to outer reinforcements. this recompenses comprise a tutor's commendation as well as approving of their input in a class, reassurance as well as accommodating response on job functioning.

The four attributes of motivation to acquire (Burden, 1995; Horn, 1995) are interest, importance, saw likelihood of accomplishment, hope of achievement or certainty, and fulfilment. Interest excites a student's interest to learn, react and take care of topic, while relevance is the degree to which students see topic substance to be noteworthy and significant to them. If they view the material as significant, they will endeavour to learn it. Seen likelihood of achievement, hope of accomplishment or certainty is the students' apparent probability of progress through their own control of their behaviour. Students will invest more energy to take in the material in the event that they are expected to pass the subject. Fulfilment is the beginners' mental stabilisation owing to feel of external reinforcements as well as comprehension of inner growing requirements.

Mathematics self-concept (MSC) is basically the students' impression of their obvious individual numerical aptitudes, limit, and mathematics reasoning limit, joy and excitement for mathematics (Marsh, 1990, 1996). Knowledgeably insight of their aptitude in an academician subject is a serious objective in itself as well as a techniques for empowering the accomplishment of other alluring consequences in guideline, for instance, educational assurance and consistency at assignments. Others join attributions to frustration or achievement, career goals, academic achievement, assurance clearly work, completing of auxiliary school, and coming about school investment (Marsh, 1991, 1993). Mathematics

self-concept of secondary school students in Nigeria is connected to their inspiration to acquire knowledge and notwithstanding their interest, perspective of significance, gratification and saw likelihood of accomplishment in learning mathematics.

In this way, any intervention intended to improve students' MSC would emphatically influence their motivation, saw likelihood of accomplishment and motivating force to learn mathematics. This suggests improving students' MSC would mechanically increase their motivating to study mathematics as well as their mathematics success (Hemke, 1990). Self-concept of aptitude (Marsh, 1990) can be efficaciously altered in subjects, for instance, science first by distinguishing an objective gathering and after that defining objectives while showing materials, important learning exercises, learning encounters, showing techniques, assessment methods and era for intercession are resolved. Self-concept of capacity in particular subject content is measured in the past and afterward an intercession. Projects that improve Mathematics Self-Concept would prevail in Nigeria if we find out about the impacts of Mathematics Self-Concept on students' motivating to Gain knowledge or skills in mathematics.

2.3.8 Motivation and Career Aspiration

Motivation discloses why individuals choose to accomplish something, how tough they are successful to seek after it and to what extent they will manage the action. Motivation is the movement of prompting and maintaining objective coordinated conduct. This is subjective clarification since it hypothesizes that individuals set objectives and utilize intellectual process (for example, arranging plus observing) as well as conduct (for example, tirelessness plus determination) toward accomplish their objectives. People as individual relate to things with various and erratic feelings and attitude, however there is proof to show how an insufficient key fundamental hypothetical standards help organise and increase our comprehension of the motivational procedures, determinants, and results on a variety of life settings.

At the beginning of the twentieth century, Sigmund Freud thought that the concepts of motivation were essential human nature and the initiative to be unconscious motivation. Carl Rogers and Abraham Maslow (1981) who were popular behaviourism of that time, humanistic psychologies identified points of motivation into individuals' lives. In this popular 'Chain of command of Needs' by Maslow's 1943 were conceptualized five essential classes of requirements, which were capable, characterized as: Physiological necessities, securely, love,

regard and self-actualisation. Nonetheless, the concentration in the character in motivational psychology at the moment is characterised by cognitive methods.

Therefore, objectives must be set and sought after by decisions. When we discuss objectives, we can discuss short term objective, for example, having decent evaluation in this subject, yet long term objectives, future objectives, life objectives or desires are things drive as a capable procedure in thinking their optimal future. As indicated by Elliot and Dweck (2005) studied demonstrated that after individuals have their own goals they will motivate themselves to transform this vision without bounds into reality. Kasser, and Ryan (2006) separated aspirations into two classes; aspirations into two categories; intrinsic aspirations and extrinsic aspirations.

The studyproposes an instrument to quantify individual's life objectives level, called the "Desire Index". Goal Index alludes to individuals' life objectives are inherent desires contain life objectives like relationship generatively and self-improvement (viz. important connections, self-awareness, and group commitments) versus extrinsic aspiration (viz. riches, acclaim, and picture). The Aspiration directory members' rate enable significance to themselves of every aspiration, their principles about the probability of accomplishing each, and how much they have officially achieved each.

Earlier research by Deci and Ryan (2001) on aspiration Directory demonstrated that prosperity was upgraded by fulfilment of intrinsic objectives, while accomplishment at extrinsic objectives gave little advantage. Introductory proof proposes that monitoring, uncomplicated child rearing is related through the improvement of solid comparative outward goal, though independence steady, included child rearing is related with the advancement of more grounded intrinsic aspirations.

Life objectives, which incorporate both intrinsic and extrinsic aspiration points of view, are key to understanding the career aspirations that students will have. The interest and fulfilment of some life objectives may give more noteworthy fulfilment of the essential mental needs than the interest and achievement of others, and that those furnishing more noteworthy fulfilment would be related with more prominent wellbeing. Intrinsic aspirations would be more emphatically connected with prosperity than would interest and accomplishment of extrinsic aspirations.

The intrinsic motivation (situated in interest) and independent extrinsic motivation (situated in significance) are both identified with performance, fulfilment, trust, and prosperity in the work environment which it identified with career aspirations. Students can

transform their intrinsic and extrinsic aspiration viewpoints into life objectives and as a result build up their career aspirations.

2.3.9 Motivation and Students' Achievement in Mathematics

Motivation is an external issue of knowledge plus classroom coordinating, on the other hand it is similarly a by-product of fruitful carrying out of classroom teaching. Weber (2008) known in a study of a female student who did not move toward becoming absorbed by mathematics until she appreciated the course material better. In the wake of experiencing little triumphs, the student was influenced to contribute more vitality at the work as well as to pursue chances to learn more. The optimistic features of education inspired the student to acquire mathematics. FRYER (2010) more inspected inspiration techniques that can act upon with middle school students. FRYER repeated that middle-grades students' shift "to middle school by opinions plus involvements from primary school that effect their motivation plus learning" (p. 61). With this supposition, FRYER applied a scheme of action of empowering students to self-overview their work despite getting educator evaluation and saw the students ' triumphs by telling what few re indicating modules were required after each assessment. A pronounced significance happens for students to get prepared to acquire, as well as the part of the classroom tutor is to act purposefully and intentionally prepared to acquire, yet if the students are unintended (Ball and Forzani, 2010). Ball and Forzani (2010) recommended that educators ought to comprehend not merely what to impart, but then again how to impart skills or knowledge to the material, signifying that tutors get a decent impression of what is applicable as well as must be prepared to deliver this selective information in a way that students can comprehend. Likewise, Risser (2010) detected students did well in course once they had discovered outside components in a convinced way instead of harmful manner.

Motivation stands as a historic part of student information that will naturally be reliable, irrespective of the student's used of instruction (Carbonaro 2005; Bahr, 2009). Discovery associations amid student motivation plus achievement would aid therapists well to comprehend exactly how to construct schools, courses, as well as regulate the material in this. The welfares of such findings might have long lasting influences for persons, schools, as well as school schemes looking for solutions to remediation.

2.3.10 Socio-Economic Background and Mathematics Self-Concept

The secondary school student's upbringing issues are significant in the student's lifetime and to influence the educational consequences plus the levels of self-concept.

Amongst the features that might influence the educational results are the family's socio-economic position, household nature plus the home-based site. The family Socio-economic position is usually strong-minded by the parent level of education, profession as well as salary levels. Relations with extraordinary socio-economic position offer their offspring with additional chances at home to shape educational accomplishments (Ferguson, 2007). Those of abject socio-economic position are to a greater extent worried by rendering a necessary wants as well as do not place abundant importance on their children' school attainment.

The money related adversities might intervene with the students' capability to focus in their school effort which may cause lowly functioning (Barry, 2005). Self-Concept has been well-known to be an imperative part of self-improvement in light of the fact that the assessment of our capabilities influences our enthusiastic encounters, future conduct and long term mental change. It has been witnessed that teenagers with positively self-Concept profiles have a tendency to be composed, agreeable and upright.

The self-Concept changes as the child builds up a general perspective of themselves in the environs wherever they are developing. This is particularly factual of students whose determined little self-concept frequently turns to further severe difficulties related to low attainment (Berk, 2006). Rowe and Hall (1991) perceive farther that teen-agers' emotional state of dignity disturb all aspects of their lives as well as powerfully effect the understanding of their potential. A teen-age with extraordinary self-concept is expressively steady, established as well as can deal with lives' trials well than the teen-age with little self-concept who inclines to be to a greater extent unbalanced as well as dependant.

Agreeing to Slavin (2006), the way the home based setting, the societal standards that rule performance in the communal the student fit in as well as the school undergoes have been well-known to have consequence on the self-concept plus educational attainment of the student. The part played by the important other people in the student's upbringing in determining the self-concept plus educational attainment cannot be overlooked. The position of education of Parents adds considerably in inspiring the attainment direction in their offspring with parents with advanced education positions existence in a well situation to add the asset of decent enactment to their offspring. The continuous stressors that come with poorness decreased parent participation as well as incompatible active surroundings deeply have emotional impact on the student's self-concept plus academic achievement (Berk, 2006).

Barry, (2005) farther detects that those students who resides in extraordinary excellence areas have been perceived to do well in school unlike their colleagues in small

areas. Early analyses have discovered that grownups whose exists are qualified by deprived psychological as well as bodily well-being, deprived financial views as well as advanced positions of illegal conduct were further expected to have had little self-concept in youth than their improved adapted as well as more capable grown-up colleagues (Santrock, 2006). Agreeing to Mutie and Ndambuki (1999) students' self-concept works as a director to determining what to be as well as what to do in the time to come. It benefits the student to know one another as well as thus check and control their manners. Mutie and Ndambuki farther declare that youth is a significant period for growth of self-concept, an optimistic self-perception or self-rating. The teen-age associates their usual as well as perfect personality plus evaluate one another by how fit they assess up to societal values as well as beliefs and how sound they do. Optimistic self-concept including extraordinary academic achievement can arrive at a deviation in ascertaining whether the person will be happy or unhappy.

The household features that are part of the background of the students can have any sort of impact in the academic achievement and self-concept of the students. The explanation taken in the background obviously exhibits that there is an association between secondary school students' experience factors and self-concept. In a society where educational achievement is assessed by the excellence assessments one accomplishes, there is need to choose the association among the socio-economic factors of the secondary school students and self-concept. Though studies have related students' background factors to self-concept. This study therefore, sought to know if students' socio-economic background of the students in secondary school can moderate his/her mathematics self-concepts.

2.3.11 Socio-Economic Background and Career Aspiration

For underprivileged adolescents, the satisfaction and acknowledgment of their aspiration might be more problematic than for their more privileged equals (Armstrong and Crombie, 2000; Hanson, 1994, and Trusty, 2002). Though aspirations importantly envisage accomplishment, irrespective of socio-economic upbringing, they might be sturdier predictors of attainment for more privileged young individuals. Schoon (2006) inspected the predictors of scrutiny act at 16 as well as mature societal rank for extraordinary and low-risk young persons in two British cohorts, 1958-NCDS and 1970-BCS70. Extraordinary against low risk status was founded on directory of societal plus financial signals. Results demonstrated that educational aspirations were important predictors for both low and high-risk youths, but had a stronger association with the examination performance of low-risk than high-risk persons. In both associates, besides, the influence of examination performance on adult social status was advanced for high-risk than for low-risk persons, chiefly in the later-born group. So,

academic accomplishment might be more significant for future achievement amongst the most underprivileged.

As expressed by Schoon (2006), future - oriented aspirations might soften the harmful influence of socio-economic disadvantage; though, young individual from disadvantage upbringings appear to bring a little extra and do particularly well in their studies in order to attain. Disadvantage young persons have very strong apprehensions of the obstacles which might stop them from actualising their ambitions. The Prince's Trust (2004) researched the goals plus ambitions of young persons from disadvantage as well as not at all disadvantage upbringings, and the hindrances that banned them from attaining their ambitions. Of the disadvantage try out, 41 per cent recognised absence of makings as a bar on their ambitions. Between 14 to 17-year-olds, 39 percent of boys found refrain from doing well by their badly manner. This extended to 48 for each penny of young women feeling disadvantaged by a nonappearance of assurance but only 28% feeling kept around their horrendous lead. Only 5 percent of obstructed youths said that nothing held them down, differentiated and 13% of persons in the dis-deprived assembling.

In affirm of the theory of Circumscription and Compromise (Gottfredson, 2002), as soon as undeveloped persons close to the age that they are talented to understand their ambitions, their chances might be restricted by the ways they have previously accepted, suchlike leaving schooling, arriving a condemnable history, or getting unwanted pregnancy. For these disfavoured underdeveloped persons, the right significant period for intercession happens at these dangerous stages in the course of life-changing transitions

Abject-socioeconomic status (SES) can have a bad result on a diversity of features of a person's lifetime as well as, bodily well-being (Singh and Yu, 1996), psychological well-being (Wight, Botticello, and Aneshensel, 2006), reasoning operative, plus educational achievement (Bradley and Corwyn, 2002). SES is usually measured in two ways, real possessions as well as unreal possessions. Few investigators contend that one acts as a greater part of the former; though, several decide that mutually features show a part in SES (Chen, Langer, Raphaelson, and Matthews, 2004). Real possessions contain of calculable possessions, suchlike investments or possessions, whereas unreal possessions include household education or profession (Krieger, Williams, and Moss, 1997). Bradley and Corwyn (2002) lay claim that the finest ways to measure SES is by the number of wealth individual owns. This comprises monetary wealth like prosperity as well as properties, human being wealth like schooling, as well as collective wealth like capitals that are an effect of societal

influences. Bradley and Corwyn (2002) trust that monetary wealth, human being wealth, plus societal wealth are all-inclusive as well as offer a precise valuation of SES.

The consequences of small SES adversely influence children's educational and academic capacities, the effects are seen to be the most disastrous in the midst of a young person's initial ages of growth (Milne and Plourde, 2006). There are a variability of motives as to why students from low SES homes fall behind other students academically. Offspring that are brought up in poorness circumstances do not have similar approach to learning assets as more prominent SES children (Bradley and Corwyn, 2002). They similarly experience chances to go to public library, galleries, or educational events. Low SES children' assets less books in the home based. Also, to fewer learning assets, small SES families are frequently to a greater extent crowded together living setting with numerous needs on the parents. In this case, parents are left with fewer period to work with their children to assist them with the essential accomplishments that aid them stand out intellectually (Constantion, 2005). Parents in high SES families afford additional acquiring chances for their children, read to them more, as well as involve them in additional meaningful plus richer discussions (Bradley and Corwyn, 2002). The investigation of Milne and Plourde (2006) established that low SES plus school achievement might be attached to learning resourcefulness's as well as effects, the mother's schooling, relations, as well as alike cases of achievement.

Low SES is a firm predictor for school failure as well as one of the greatest usual predictors that is quoted as aim for school failure (Caldwell and Ginther, 1996; Suh, Suh, Houston, 2007). Low SES students constitute the main populace of students that are believed to be endangered of quitting schools (Caldwell and Ginther, 1996). Absence of school attainment is usually the purpose for low SES student failure (Caldwell and Ginther, 1996; Suh, Suh, Houston, 2007). Suh, Suh, and Houston (2007) investigated the three utmost usual predictors of school failure (SES, deprived school attainment as well as deferment from school) to discover what factors in these three groups increase the risk of school failure. Suh, Suh, and Houston's effort establish that up to fifteen extra factors influence a low quality of SES student's choice to leave school. The greatest important factors that affect school failure in low SES students are, low learning accomplishment of the maternal parental (chiefly if the student is with that blood relation), many school variations, as well as partaking in sex before the age of 15. From the outcome of their results, Suh, Suh, and Houston (2007) suggest that school therapists get in touch with the students as well as suggestion supplementary educational provision to students of low SES. School therapists must also influence the fresh students that are thought to be endangered. Therapists must work to assistance the students

make a smooth transition to their new school as well as carry on to upkeep the student during the school time.

Generally, therapists can recover endangered students' probability to prosper by occupied with these students to assist them grow a supplementary hopeful opinion of the upcoming as well as connecting them through age group that project to go to college (Suh, Suh, and Houston, 2007). Suh, Suh, and Houston (2007) reflect support students to grow a hopeful opinion of their forthcoming as the constituent that can be the greatest powerful to the student. The more a student's incentive is self-strong minded, the smaller amount of possible the student is to quit school (Vallerand, Fortie, and Guay, 1997). Suh, Suh, and Houston propose that career founded classroom program design that is intended to help students develop an optimistic plan and outlook for the future prior is a real method to pay attention to endangered low SES school failure.

Low SES students are extremely signified in information of punishment recommendation on, as well as deferment amounts (Christle, Nelson, and Jolivette, 2004; Hayden, 1994; Skiba, 2002). Once a student is detached from the school surroundings it is difficult for the student as it slowly increases societal as well as school disconnection. Once this occurs it increases examples of school let-down plus school failures (Bakken and Kortering, 1999; DeRidder, 1991).

Profession development shows a significant part in career growth for high school students. Most time, SES destructively influence the career development procedure. Consequently, it is significant for school therapists to help students with low SES to help them in job progress plus ideas. Investigation displays that students of low SES are occupied in a smaller amount of thoughtful career growth undertakings, obtain a smaller amount of direction in school and from home-based concerning career (Blustein, 2002) as well as come across obstacles that stop them from going to college (Valadez, 1998). Investigation proposes that there is a disparity in preparation to go to school as well as really going to college with low SES students. A likely clarification as to the reason this disparity happens is that the students lack a full awareness of what it entails to attend college as well as by what means to get there. Characteristically, there is likewise slight assistance plus provision from low SES Parents in information relating to college, educational planning as well as setting up for college (Fallon, 1997; Valadez, 1998). Low SES students are similarly further expected to reckon their career as well as learning selections established on financial limits as well as household duties (Inman and Nayes, 1999).

Career growth not merely aids student's strategy for their upcoming, it can likewise aid students understand the worth of school as well as broaden school planner (Kenny, 2006). Investigation displays that low SES harmfully influence occupation growth (Blustein, 2002). More significantly, it is true that a number of career growth concepts might not be appropriate to persons of low SES, making it further hard for this populace to organise their future (Brown, 2000; Kerka 1998). Social Cognitive Career Theory sights the position of the communication of individual qualities, external ecological issues as well as performance in the career decision creation procedure. Though, obstacles that go together with low SES might be prejudiced by self-concept or self-effectiveness thus prevent assurance that low SES persons do not understand as truthful for themselves. Lifetime Concepts emphasis on career growth through the lifespan as well as profession adulthood. Low SES persons are not as talented to discover as well as work out for their career, which harmfully influence career adulthood. Low SES child possess lesser positions of career adulthood owing to non-existence of work-related evidence, worthy person, as well as occupation chances; all of these outcomes in low career adulthood (Kerka, 1998). However, these philosophies might not be appropriate to low SES career growth, Social-Cognitive Career Theory has a hopeful theoretic outline for accepting the school to work move (McWhiter, 2000).

2.3.12 Socio-Economic Background and Students' Achievement in Mathematics

Despite the school the child goes to or the area the child lives in, quality schooling and assets must be given and made accessible all together for the child to be educationally fruitful. From the minute children are conceived, they are realizing: how to walk, read, and talk; how to do everything (Chemerinsky, 2005). Expansive investigation in the cultural of schooling proposals decisive indication of an optimistic association amid domestic socio-economic status (SES) and the school attainment of students (Sirin, 2005; White, 1982).

In this investigation element, it is justly normal to describe domestic SES as the comparative location of persons or relations inside a ranked community construction, founded on their approach to, or mechanism above, prosperity, respect, as well as influence (Mueller and Parcel, 1981), though no robust agreement is on the theoretical sense of SES (Bornstein and Bradley, 2003). Besides, a lone SES variable is processed over events describing parent schooling, parent work-related respect, plus household revenue (Gottfried, 1985; Hauser, 1994; Mueller and Parcel, 1981).

The connection amid household SES as well as academic achievement is gradual also rises through the variety of SES (Adler, 1994; Willms, 2002, 2003), or as a socio-economic disparity for it suggests a disparity in academic achievement amid student of extraordinary as well as low SES families. Academics have revealed that a socio-economic disparity in the initial school posterity has permanent importance. Exceptionally, as low SES children become grownup their condition inclines to deteriorate. As of their comparatively deprived talents, they are susceptible to vacate school quickly (Alexander, Entwisle, and Kabbani, 2001) as well as are fewer probably to remain allocated to the college foundation pathway (Trautwein, Lüdtke, and Baumert, 2008). In the advanced period, they are less expected to go into the employment market place positively or go to higher institution (Alexander, Entwisle, and Olson, 2007). That learning as well as work chances are unevenly dispersed amongst persons of fluctuating SES stances worries as well as trials in social requests that esteem measure up to circumstance independent of socio-economic foundation.

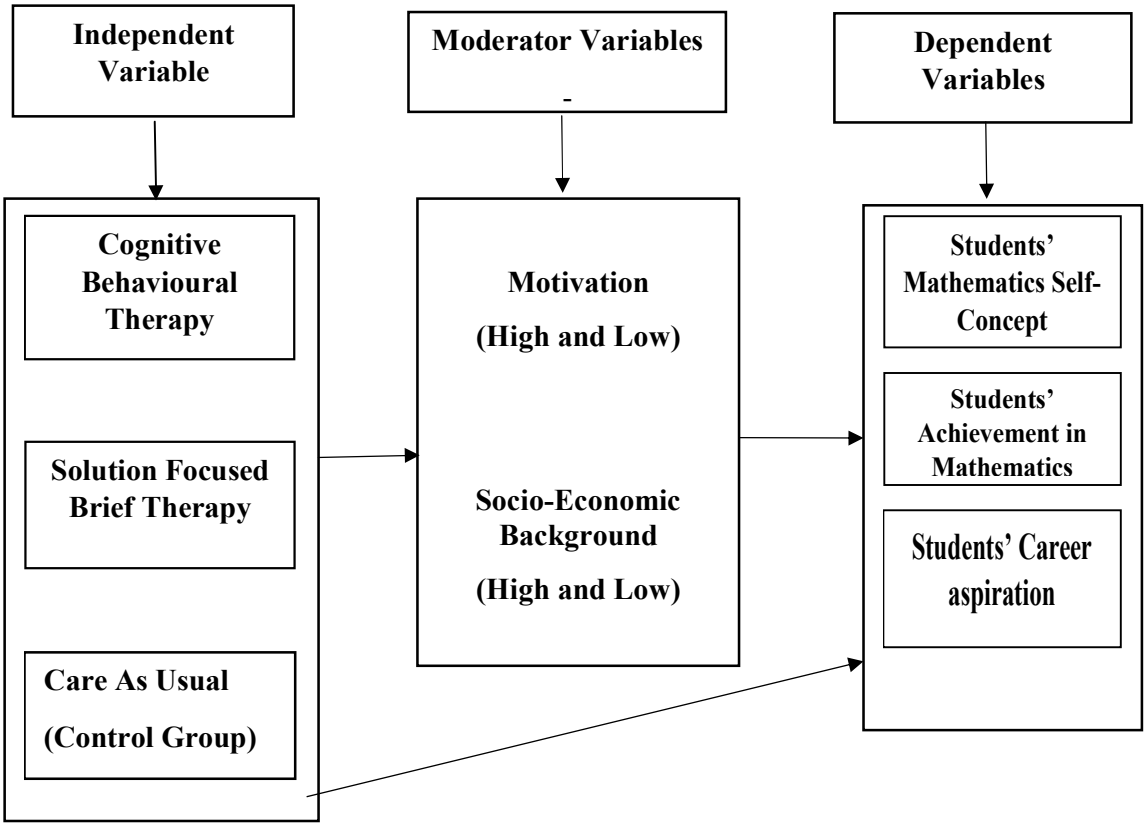
The teaching and learning position of guardians has an impact on the esteem set on education, which thus has an effect on the instructive practices at home (Eccles and Davis-Kean, 2005). Educated guardians have a tendency to transmit to their children the educational culture they gained at school, which can affect emphatically on child learning and performance (Mayer, 2002). Sylva, (2014) reported that better educated parents are able to raise their children to have healthy self-perceptions about their academic abilities, and engagement in intellectual activities, and that such parents also additionally for the most part have adolescents with less social issues that can block their learning encounters. Also, Gustafsson, (2011) analyses of TIMSS and PIRLS 2011 data revealed that children of more educated parents achieved statistically significant gains than their peers whose parents are not well educated. They reported that guardians with more elevated amounts of training include their children in proficiency exercises to a bigger degree than guardians with lower levels of education.

Besides, analysts have inspected the basic family forms that intercede the connection amongst SES and educational results (Chao and Willms, 2002); the degree to which financial holes in academic accomplishment are reliable crosswise over branches of knowledge (Ma, 2000); the school hones that can viably decrease accomplishment disparities crosswise over SES gatherings (Cohen, 1982; Rutter and Maughan, 2002; Scheerens, 1992); the degree to whichever the result of SES on student act of accomplishing something differs amid societies as well as reason (OECD, 2003, 2004, 2007; Willms and Somers, 2001); as well as in what

way financial plus constitutional powers are done one after another on the rapport amid socio-economic upbringing plus education products in time (Heath and Clifford, 1990; Willms and Raudenbush, 1989).

2.4 Conceptual Framework

CONCEPTUAL MODEL FOR THE STUDY



2.5 Appraisal of Literature

Appraisal of Literature

Adegoke (2015) worked on Big-Fish-Little-Pond Effect, Mathematics Self-concept Concept and academically Selective and academically non-Selective Schools on Three hundred and twenty-eight Junior Secondary School Two students (JSS II) who were randomly selected from two schools, one private school which is academically selective from Ibadan North with the teacher-student ratio 30:1, and one public school which is academically non-selective from Ibadan south west Local Government Area with the teacher-

students ratio of approximately 50:1 in Oyo State. The Mathematics Self-Description Questionnaire (MSDQ) was developed especially to measure mathematics self-concept of the students just once. He used the marks books of the mathematics teachers in each school to get the students' Mathematics achievement Scores. The study was only on survey and other variables like students' motivation, students' socio-economic background, students' career aspiration and the students' common entrance scores were not considered. He did not do experimental. This study involved survey and experimental. In the experimental aspect of this work, the researcher was able to counsel the students by given them some treatments. The investigations by Marsh and Hau (2003) and Seaton, Marsh, and Craven (2009) was noticeable as the two most able a faceted relative studies of the Big-Fish-Little-Pond Effect. These investigations exhibited that the Big-Fish-Little-Pond Effect summed up through different countries and social orders with extensively illustrative cases of students and hereafter settled its status as a "skillet human hypothesis". By means of data from the Programme for International Student Assessment (PISA) 2000 (OECD, 2001), concentrating on over-all educational self-concepts, Marsh and Hau (2003) remained the major to demonstrate the Big-Fish-Little-Pond Effect in broadly illustrative examples of 15-year-old students from 26 nations. The investigation is on review and different factors like students' motivation, students' socio-economic background, students' career aspiration and the students' common entrance scores were likewise considered. They established that the result of school-average achievement on academic self-concepts remained meaningfully bad in 24 out of the 26 nations involved in PISA 2000. Marsh and Hau too established a minor but important difference of the Big-Fish-Little-Pond Effect through the nations in their illustration. On the other hand, though they used the biggest obtainable sample at that period, the nations comprised in the Marsh and Hau (2003) review was mainly from Western Europe limiting nearly all their results toward African locations.

Lepper, Corpus, and Iyengar (2005) assessed the relationship among intrinsic and extrinsic motivation and achievement in third over eighth-grade students. They establish that students who remained intrinsically motivated did well on standardised achievement studies while individuals who remained extrinsically motivated did poorer. Gottfried (1985, 1990) proposed evidence individuals' students who existed to be additionally intrinsically motivated observe themselves to be more intellectually capable. Treatments like cognitive behavioural group therapy and solution focused brief therapy used in this present study were not considered to help those students who were extrinsically motivated.

Some studies OECD, 2001; Pong and Ju, 2000 suggest that higher socio-economic status is related with better academic Enactment and others like White, 1982 propose that this association is weak at best. Moreover, Bachman and O'Malley, 1986; Marsh, 1984) believed that the impact of individual socio-economic status on academic self-concept has tended positive. In any case, accessibility of home offices like Computer, Electricity, Generator, Tap water and different offices utilized as a part of this present study, were not considered if this is the motivation behind why most students from high socio-economic background are performing better than the students from low socio-economic background.

Research on career aspirations for the future (FUT)—students' confidences as well as hopes of follow a career in an exact field has been control by the look for individual issues that affect career as well as work-related selections and through finding methods to truly compete an individual's favourites as well as the industrialised atmosphere Fouad, 2007; Hurlock 1967, Educational self-principle have been establish to be a significant predictor for occupation choices at the specific position (Betz and Hackett, 1981; Hackett and Betz, 1981; Marsh, 1991; Marsh and Yeung, 1997a; Allport 1961).

The social– cognitive model of career aspiration (Lent, Brown, and Hackett, 1994) expect a meditational chain in which self-related cognitions influence interests, which in this manner impact activities as well as decisions to participate in a region which, thusly, predicts levels of performance. While individual self-concepts alongside a variety of other individual components have been contemplated broadly as indicators of career desires and profession advancement by Fouad, 2007, and logical hindrances have likewise been an essential concentration by (Lent, 2005), treatments in form of counselling to improve the self-concepts used in this present study, have received less attention in their study.

Marsh (1991), who joint the sociological investigation tradition that concentrated on career ambitions with his investigation plan on the Big-Fish-Little-Pond Effect on academic self-concept, by means of facts from the longitudinal High School plus beyond study (National Centre for Educational Statistics, 1986), indicated that school-average achievement adversely affected career aspirations after monitoring for individual achievement and other individual differences. More important, though, he established that the possessions of specific as well as school-average achievement on profession desires remained totally interceded by educational self-concept. While these studies provided initial evidence for the important role of academic self-concept in mediating the negative effects of school-average achievement on career intentions, he never considered if career aspiration can be influenced by academic self-concept and academic achievement.

The current study used large sample of 3,008 (1,474 students from academically selective schools and 1,534 students from academically non- selective schools) students, junior secondary School one students (JSS I) who were randomly chosen from 60 public schools (30 academically selective schools and 30 academically non- selective schools), both in Ibadan and Oyo town from six local government areas with the teacher-students ratio of approximately 60:1., in Oyo State. Mathematics self-concept was administered twice, Mathematics achievement test was developed so that the students' Mathematics achievement Scores were not inflated. Other variables like students' motivation, students' socio-economic background, students' career aspiration and the students' common entrance scores were also considered. The present study included survey and experimental.

The desire to investigate connections amid academic self-concept as well as different concepts is conversant by a variety of theoretical approaches looking to clarify academic performance. Literature shows that psychological constructs such as Big-Fish-Little pond Effect, school average achievement, and academic self-concept are important student's and school's factors necessary for assessment of students' performance. From a social character viewpoint (Brewer, 1991; Ellmers, Spears, and Doosje, 2002), and from a social and identity viewpoint (Baumeister, 1998; Markus and Wurf, 1 98 7; Sedichildes and Brewer, 2001; Swann and Besson, 2010) demonstrate that self-concepts is a greatest among the most basic concepts in the sociologies as displayed by the regularity /consistency with which self-concepts enhancement is perceived as a major focus of concern in diverse settings. Therefore, educational policy statements all through the world show self-concept enhancement as a vital objective of education as well as a fundamental medium aimed at keeping an eye on social inconsistencies experienced by disadvantaged groups. Imperative is affirmation that talented youth make internal and external comparisons around academic capability.

The inconsistency in the findings of studies on Big-Fish-Little-Pond Effect necessitated this study. Nearly all the available literature on Big-Fish-Little-Pond Effect originates from the USA, Europe, Asia, and Australia. It seems few have been carried out in West African and indeed in Nigeria. Even with the few studies on Big-Fish-Little-Pond Effect in West Africa and Nigeria, most of the studies used survey methods and not experimental. Hence, these gaps have been filled.

Previous studies especially indigenous studies tend to be more speculative and theoretical on the problem of associating with students' mathematics performance, and researchers have done more of surveys in identifying the causes of poor mathematics performance exhibiting by students. It was therefore realised that there is a shortage of exact

investigations and use of psychotherapeutic intervention in curbing the problem of poor performance locally. Hence the need to link a gap between theories and practices through the use of cognitive behavioural group therapy and solution focused brief therapy in bringing about good performance in ending students' attitude and ability towards learning of mathematics have been filled.

CHAPTER THREE

METHODOLOGY

This section summarises the proceedings that were used to gather as well as examined data. It emphasis on study design, variables, location of the study, target populace, sampling techniques plus sample size, report of study instruments, explanation of pilot study as well as a temporary procedure plus methods that were used to gather, examine as well as present data.

3.1 Research Design

This investigation was carried out in two phases; Phase one is Descriptive design and phase two used a non-randomised pre-test-post-test, control group design in a quasi-experimental setting.

3.2 Variables in the study

The list of the variables for the two is presented in Table 3.1

Table 3.1: Showing Variables for the Two Phases

Phase 1	Phase 2
Descriptive variables 1. Students' Mathematics Self-Concept (SMSC) 2. Students' Achievement in Mathematics (SAM) 3. Students' Common Entrance Examination Scores (SCEES)	(a) Independent variable Treatment at 3 levels -Cognitive Behavioural Group Therapy (CBGT) - Solution Focused Brief Therapy (SFBT) - Control Group (CAU) (b) Moderating variable (i) Students' Motivation for Learning at 2 levels - High - Low (ii)Students' Socio-Economic Background at 2 levels - High - Low - (c) Dependent variable (i) Students' Mathematics Self- Concept. (ii)Students' Achievement in Mathematics (iii)Students' Career Aspiration.

The schematised layout of the design is as follows:

Experimental Group 1 0_1 X_1 0_2

Experimental Group 2 0_1 X_2 0_2

Control Group 3 0_1 $\sim(X_1 \cup X_2)$ 0_2

0_1 - Represents pre-test scores for groups 1, 2, and 3

0_2 - Represents post test scores for groups 1, 2, and 3

X_1 - Represents experimental group one that received Cognitive Behavioural Group Therapy (CBGT)

X_2 - Represents experimental group two that received Solution Focused Brief Therapy/Counselling (SFBT)

$\sim(X_1 \cup X_2)$ - Represents Control group that didn't receive any treatment

The design employed 3 X 2 X 2 factorial matrix which allowed for the determination of effect of each independent variable and also provided an opportunity to determine the combined influence of independent and moderating variables on the dependent variables.

More Information on Phase 2

Table 3. 2: Showing 3 x 2 x 2 Factorial Matrix for Phase 2

		Treatment					
		Cognitive Behavioural Therapy/Counselling (CBGT)		Solution Focused Brief Therapy (SFBT)		Control Group	
Socio-Economic Background (SEB)		High	Low	High	Low	High	Low
Motivation	Low						
	High						

3.3 Target population for the two phases

The target population comprised all the junior secondary school one students (64,776-Male 32,377 and Female 32,399) in the 2016/2017 session in Oyo state. The state is made up of three senatorial districts, comprising of thirty-three local government areas (LGAs). Some of the schools are known as academically selective schools and the rest are academically non-selective schools. Year one students were targeted because they have just left the primary schools where some of them were big fishes in their little pond. They were still new in secondary school and are changing in accordance with new systems; new classmates and the greater part of them still feel unsure about themselves in their new surroundings

3.4 Sampling Technique and Sample

3.4.1 Phase one:

Out of the three senatorial districts we have in Oyo state (Oyo Central, Oyo North and Oyo south). Twosenatorial districts (Oyo Central and Oyo South) were randomly selected. Out of the twenty (LGAs) in the two senatorial districtsrandomly selected, only nine LGAs have academically selective junior secondary schools (Oyo central =5 and Oyo south=4).

Out of the nine LGAs in the two senatorial districts that have academically selective junior secondary schools, simple random technique was employed to select three LGAs each from the two senatorial districts. In each of the six LGAs, random sampling was used to select ten schools (five academically selective junior secondary schools and five

academically non-selective junior secondary schools). The researcher used intact class for the study in each of the 60 schools.

From the six local government area, sixty (60) schools (thirty academically selective and thirty academically non-selective) were randomly selected. In each sampled school, two JSS one intact classes were randomly selected. The total number of students used in the first phase of the study was 3008 (1,474 students in academically selective schools (659 male students and 815 female students). Also, 1534 students in academically non-selective schools (732 male students and 802 female students). The averageage of the students were between 9 and 15 years old.

Table 3.3: **Sampling Distribution**

No of senatorial districts in Oyo State	No of selected senatorial districts	No of LGA in the Two senatorial districts selected in Oyo State	No of Selected LGA in the Two senatorial districts selected in Oyo State	No of Selected Schools in the selected LGA in Oyo State	No of Students
3	2	20	6	60	Intact Class (3008)

3.4.2 Phase two:

Experimental Method

Twelve schools (nine academically selective and three academically non-selective) which had between eight and twelve students scoring less than 5deviation and below in the first mathematics self-concept, second mathematics self-concept (zwhich was given to the students during the second term, precisely after four months), students' mathematic achievement test and their common entrance records were randomly selected. Schools that do not have at least eight students were deleted from the list. In a school where there are more than twelve students with less than5 and below, only twelve students were randomly selected. Out of the six local governments areas initially used (that is Ibadan North, Ibadan South East, Ibadan South West, Akinyele, Atiba and Oyo East) only four local government areas (that is Ibadan North, Ibadan South East, Ibadan South West and Atiba) met with the selection criteria.

The schools in each of the Local Government Area were:

(1) Atiba

- School A (Academically Selective School)
- School B (Academically Selective School)
- School C (Academically Selective School)

(2) Ibadan North

- School A (Academically Selective School)
- School B (Academically Selective School)
- School C (Academically Non-Selective School)

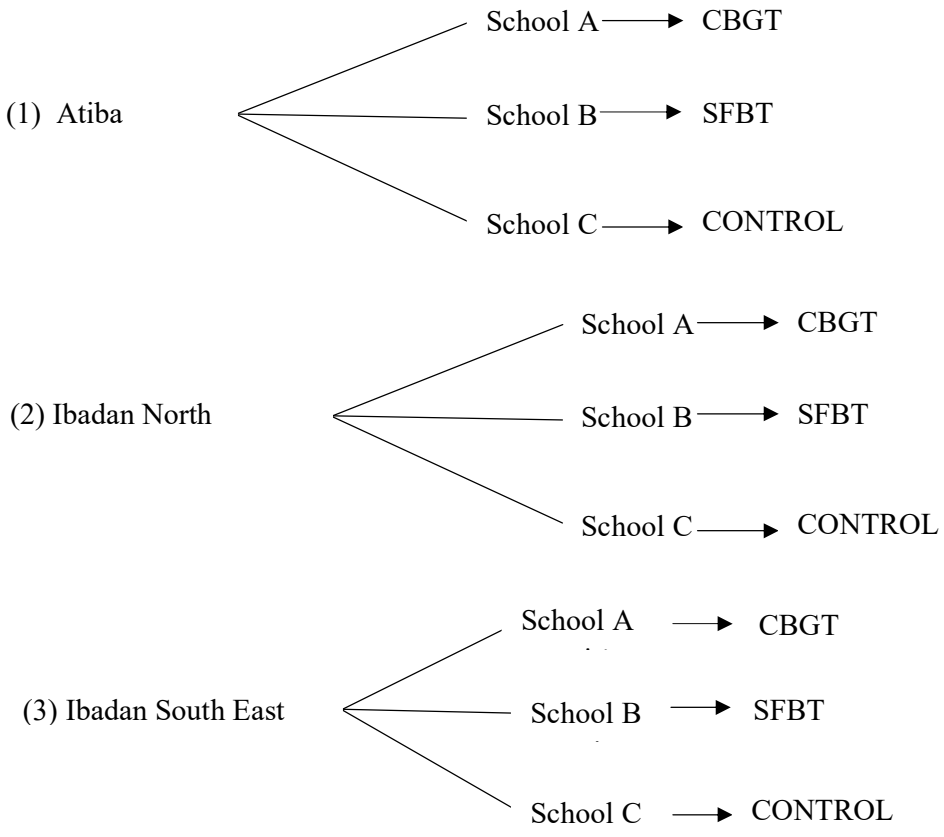
(3) Ibadan South East

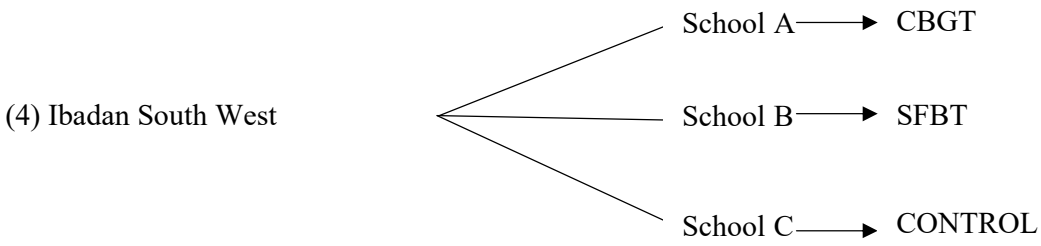
- School A (Academically Selective School)
- School B (Academically Non-Selective School)
- School C (Academically Selective School)

(4) Ibadan South West

- School A (Academically Selective School)
- School B (Academically Non-Selective School)
- School C (Academically Selective School)

All the 12 schools (Nine academically selective schools and Three academically non-selective schools were randomly assigned to each of the three treatments (Cognitive Behavioural Group Therapy, Solution Focused Brief Therapy and control).





Group A (Cognitive Behavioural Group Therapy Group) from

1. Atiba School B
2. Ibadan North School C
3. Ibadan South East School A
4. Ibadan South West School B

Group B (Solution Focused Brief Therapy Group) from

1. Atiba School C
2. Ibadan North School A
3. Ibadan South East School C
4. Ibadan South West School A

Schools C (Control Group) from

1. Atiba Alaafin Senior High School, Oyo.
2. Ibadan North Emmanuel College Ibadan
3. Ibadan South East Ibadan Grammar School Junior Molete
4. Ibadan South West Oluyole Estate Grammar School Ring Road

Table 3.4: **Sampling Distribution**

Academically Selective Schools / Academically Non-Selective Schools	**Schools used for survey**	**Schools used for experimental**
Academically Selective Schools	30 (1,474)	9 (98)

Academically Non-Selective Schools	30 (,1534)	3 (28)
Total	60 (3,008)	12 (126)

3.5 Instrumentation

3.5.1 Phase one:

Two instruments and one record format were used in phase one namely:

- Mathematics Self-concept Scale (MSCS)
- Mathematics Achievement Test (MAT)

Record Format: This was used in collecting the common entrance score (CES)

3.6. Phase two:

Five response and three stimulus instruments were used in phases two and three namely:

Response Instruments

(1) Mathematics Self-concept Scale (MSCS)

(2) Mathematics Achievement Test (MAT)

(3) Students' Motivation Scale (SMS)

(4) Parental Socio-Economic Background Questionnaire (PSEBQ)

(5) Students' Career Aspiration Scale (SCAS)

Stimulus Instruments

(1) Cognitive Behavioural Group Therapy (CBGT)

(2) Solution Focused Brief Therapy (SFBT)

(3) Care As usual (CAU)

3.6.1 Mathematics Self-Concept Scale (MSCS)

Mathematics Self-Concept of the students was measured by the Mathematics Self-concept Scale (Appendix I). This instrument was developed by the researcher. She examined similar current instruments from the literature that measure a similar construct by paying careful consideration to the formulation of response options and instructions. The first version of the instrument developed was trial tested on small groups of students. This was proposed to test the conceivability, importance, and worthiness and achievability of the estimation of the instrument. This instrument was administered on students to measure the degree of their self-

concept and to assess how confidence they were in mathematics. The instrument comprised of two sections A and B. Segment A contained fact about student's Bio-data such as name of school, location of school (town), local government area, gender, age as well as class. Section B contained 15 items graded under 4 point Likert type response format of; Very True of Me (VTOM); True of Me (TOM); Not True of Me (NTOM) and Absolutely Not True of Me (ANTOM). Instances of the items that were contained in the test are: "I think I am one of the best students in Math", "I can follow the mathematics lessons easily", "and every question in Mathematics is answerable "The MSCS was administered during mathematics times in every one of the classes that was examined. Fifteen minutes was given to the students to complete the questionnaire.

Positively expressed items were evaluated as 4, 3, 2, and 1, while scoring was reversed for adversely expressed items. Hence possible range of scores is between 15 and 60 such that higher scores indicate higher confidence in mathematics and vice versa.

The instrument was pilot tested on a sample of 120 J.S.S. I students that were not part of the study sampled from the local government that was not part of the local government used for the real study. The reliability coefficients obtained, using Cronbach alpha, for the instrument was 0.938.

3.6.2 Mathematics Achievement Test (MAT)

Mathematics Achievement Test of the students was measured by the Mathematics Achievement Test (Instrument ii) (Appendix II). This instrument was developed by the researcher. She examined similar current instruments from the literature that measure a similar construct by paying careful consideration to the formulation of response options and instructions. The first version of the instrument developed was trial tested on small groups of students. This was proposed to test the conceivability, importance, and worthiness and achievability of the estimation of the instrument. This instrument was administered on students to measure the degree of their ability in mathematics. The instrument was developed by the researcher with 20-items consisting of a multiple choices lettered A to E that tasks student's knowledge in Mathematics known as Mathematics Achievement Test (MAT) (see appendix II) was used. To validate the Mathematics Achievement Test (Instrument ii), a test blue print was constructed for the development of the items.

Every properly responded question attracts 1 mark such that likely collection of scores on the test was 0 to 20 marks. This instrument consisted of two sections, A and B: section A was on the Bio-data of the students which included Name of School, Location of School

(Town), and Local Government Area, gender, age and class. Section B consisted of 20 items constructed from JSS I curriculum and textbooks. Initially 30 items were developed after administering to 120 students, who were not part of the study sampled from the local government that was not part of the local government used for the real study. Items with low difficulty index less than 0.30 and the questions that were too simple were removed to give the final 20 items.

Opinions of specialists were required regarding the suitability of the developed items. Its reliability was found after administering to a sample of 120 JSS 1 students using Kuder-Richardson Formula 20 (KR 20). The reliability coefficient obtained was 0.680 and difficulty indices of the items ranged between 0.400 and 0.600. The Table of specification is as shown in Table 3.5.

Table 3.5 Table of specification for Mathematics Achievement Test (MAT) JSSI

S/N	Contents/Objectives	Levels Of Cognitive Domain			Total 100%
		Knowledge 40%	Comprehension 10%	Application 50%	
1	Basic Operations 45%	4(1,6,7,9)	0	5(2,4,12,14,15)	9
2	Number and Numeration 25%	2(5,18)	1(8)	2(3,11)	5
3.	Algebraic Processes 15%	1(13)	1(10)	1(17)	3
4.	Geometry and Mensuration 15%	1(16)	0	2(19,20)	3
5.	Total 100%	8	2	10	20

3.6.3 Students' Motivation Scale (SMS)

Students' Motivation Scale of the students was measured by the instrument tag Students' Motivation Scale (SMS) (see Appendix III). This instrument was developed by the researcher. She examined similar current instruments from the literature that measure a similar construct by paying careful consideration to the formulation of response options and instructions. The first version of the instrument developed was trial tested on small groups of students. This was expected to test the understand ability, pertinence, and adequacy and plausibility of the estimation of the instrument. This instrument was administered on students with a view to getting information on the students' motivation in learning mathematics. The instrument comprised of two sections A and B. Section A contained data about student's bio-data like name of school, location of school (town), local government area, gender, age as

well as class. Section B contained of 15 items rated under 4 point Likert type response format of; Very True of Me (VTOM); True of Me (TOM); Not True of Me (NTOM) and Absolutely Not True of Me (ANTOM). Instances of the items that were in the test are: I wish to learn mathematics because: "My mathematics teacher uses a variety of teaching methods", "I feel confident about the topics in a mathematics class", "and I always win prices anytime I go for mathematics competition". The SMS was administered during mathematics periods in all the classes that was sampled. Twenty minutes was given to the students to complete the questionnaire.

Positively expressed items were evaluated as 4, 3, 2, and 1, while scoring was reversed for adversely expressed things. Hence possible range of scores is between 15 and 60 such that higher scores indicate higher confidence in mathematics and vice versa.

The instrument was pilot tested on a sample of 120 J.S.S. I students that were not part of the study sampled from the local government that was not part of the local government used for the real study. The reliability coefficients obtained, using Cronbach alpha, for the instrument was 0.922.

3.6.4 Parental Socio-Economic Background Questionnaire (PSEBQ)

This instrument was developed by the researcher. She examined similar current instruments from the literature that measure a similar construct by paying careful consideration to the formulation of response options and instructions. The first version of the instrument developed was trial tested on small groups of students. The PSEBQ was used to gather information from the students about their socio-economic background. Such information included parents' occupation, the type of home they live in, and income per year. The instrument in Appendix 1V contained 15 items and five sections, A, B, C, D and E. Section A contained of Bio-data information about student's gender and age. Section B contained 4 items like "My father's highest qualification is?" from which the students ticked the appropriate answer. Section C contained 5 items like "What kind of primary school did you go to?" from which the students ticked the appropriate answer and also ticked yes or no where necessary. Section D contained 5 items like "Is the house you are living owned by your parents?" from which the students ticked the appropriate answer. Section E dealt with the availability facilities students have at home. The face validity of the instrument was completed by the investigator's supervisor as well as additional professionals in the area of questionnaire and scale development to know whether the items in the instrument appear to be relevant, reasonable, unambiguous, appropriateness of grammar, correct spelling of words,

correct structuring of the sentences and clarity of items. 30 minutes was given to the scholars to finish the questionnaire.

3.6.5 Student's Career Aspiration Scale (SCAS)

Student's Career Aspiration Scale (SCAS) in Appendix V was constructed specifically by the researcher. She examined comparative existing instruments from the literature that measure a comparable construct by paying careful attention to the formulation of response decisions, rules, and picking a fitting option .The first form of the instrument created was trial tested on small groups of students. This was expected to test the intelligibility, significance, and worthiness and possibility of the estimation of the instrument.

The instrument was utilized to survey the nature and level of students' career aspiration. The instrument comprised of two sections A and B. Section A contained data about student's bio-data such as name of school, location of school (town), local government area, gender, age and class. Section B consisted of 13 items with modified Likert type scale with response format; Very Important (VI); Important (I) and Not Very Important (NVI). Instances of the items that were in the test are: "How important is it for you to get good job you like when you leave school? "How important is it for you to become a consultant in teaching hospital?", "and How important is it for you to become an artisan in life? ". The SCAS was administered during mathematics periods in every one of the classes that was examined. Twenty minutes was given to the students to complete the questionnaire.

Definitely stated items were rated as 4, 3, 2, and 1, whilst scoring was inverted for negatively stated items. Hence possible range of scores is between 13 and 52 such that higher scores indicate higher confidence in mathematics and vice versa.

The instrument was pilot tested on a sample of 120 J.S.S. I students that were not part of the study sampled from the local government that was not part of the local government used for the real study. The reliability coefficients obtained, using Cronbach alpha, for the instrument is 0.884.

3.6.6 Score Record

3.6.6.1 Common Entrance Result (CER)

The instrument is a two dimensional grid with name, examination number and common entrance examination scores. The instrument was used to collect the common entrance record for the students transiting from primary schools to JSS one (See appendix X)

3.6.7 STIMULUS INSTRUMENTS

3.6.7.1 Cognitive Behavioural Group Therapy (CBGT)

This guide is the eventual outcome of an alteration of the Cognitive-Behavioural model made by Dr. Aaron T. Beck about fifty years ago, for the treatment of self-concept which affects students' academic achievement and their career aspiration. The principle points of this intervention are to diminish low self-concept effects in students.

Cognitive Behavioural Group Therapy (CBGT) means to empower students to grow into conscious when they make undesirable explanations, as well as of conduct cases which strengthen the misleading thoughtful. Cognitive therapy aids persons to grow other habits of thinking plus performing which intends to diminish their psychological agony. The group position was adjusted to an individual treatment methodology. In this way, the treatment concentrates more on the young people's issues and expenditures their opinions, encounters, activities, as well as connections as cases of the material to be exhibited. This makes for a more powerful and intelligent treatment, hence enabling the immature to accept a more dynamic part. The therapist meets the adolescents and their teachers previously the remedial technique initiates. This makes an open meeting to develop fondness with the adolescents and explore in detail their condition. Studies completed in late decades reliably uncover that the cognitive-behavioural method is fruitful in the conduct of immature issues problems like low self-concept, poor academic performance in mathematics and their academic performance generally which affect their choice of future careers.

Treatment sessions were separated into three subjects or components that include two or three sessions each. The underlying three sessions tackle how contemplations affected disposition. The accompanying three sessions inspected step by step practices that impacted disposition. The last two sessions talked how coordinated efforts with others impacted our feeling. A depiction of each unit is given, for example Opinions (sessions 1-3). The fundamental motivation behind this unit is to exhibit how our contemplations impacted our temperament. Exercises (sessions 4-6). The sessions that created this unit enabled members to look at the connection amid their investment in enjoyable exercises as well as low self-concept effects which affects their poor performance in their academic works like mathematics. The fundamental target of this component is for young people to pick up on the way to manage them exists as well as recognize to pick up a feeling of flexibility. Organised with the psychotherapist, they create choices plus objectives, approaches as well as recognize exercises that will enable them to enhance their state of mind. Individuals (sessions 7-8). The sessions that made up this module presented how relational connections influence mind-set.

The collection worked with the matter of peer groups in addition classmates, and the way these affected their academic performance when they compared their performances with their peer groups. The adolescent learns to have confidence in themselves and believe in themselves as well. The group intervention created utilized forms that are inalienable to assemble treatment, for example, empowering modelling of proper behaviour amongst age groups.

NB: (appendix VII)

3.6.7.2 Solution Focused Brief Therapy (SFBT)

This guide is the after effect of an adjustment of the Solution Focused Brief Therapy (SFBT) model created by de Shazer and associates about forty-seven years ago at Milwaukee's Brief Family Therapy Centre. SFBT groups permit the counsellor to help students with a diversity of anxieties in a single group. Since the group is heterogeneous in relations of their recognised problem, the group is not labelled, such as an "anger management group," or a "social skills group."

In the SFBT model, everything the therapist does is strategic in assisting the participant to establish his or her measurable, obtainable goals or solutions. The primary premise of SFBT is to change behaviour. Solution-focused therapists have developed methods for exploring 'exceptions' to the presenting problem, and building solution orientated tasks upon these exceptions. There was also a focus on helping participants to construct pictures of 'life without the problem', and on helping the participant to be able to recognise the first signs of progress.

Group participants experienced eight 30-minute sessions of SFBT, meeting once a week for eight weeks, with the researcher flexibly following the SFBT group outline provided by LaFountainand Gamer (1996; as outlined in Appendix VIII), with the researcher acting as group leader, and a party with food and refreshments was held the last session. The following section describes the common steps of the SFBT interview including common questions and tasks employed in each step. The solution building interview relies heavily on two activities: "The first is the growth of shapely objectives inside the participant's frame of reference; the second is the growth of solutions founded upon exemptions, Solution focused questions, methods, and tasks were applied by the investigator where suitable.

A variety of SFBT questions, techniques, and tasks were implemented. Additionally, the researcher made a note of each subject's personal goal during the orientation interview and asked each subject to provide a scale score for their progress toward that goal at that time

and at the beginning of each group session. Finally, in the role of participant observer, the researcher took informal process notes each group. The principle focal point of this treatment is to help the treatment searchers to change their mentality and articulation towards the arrangements, with the goal that treatment searchers discover the approaches to change the circumstance (Corey, 2005).

Forming (Session 1-3), this had to do with the Objectives, students get acquainted in the group and with group rules and procedures where students introduced themselves and established ground rules. Students shared what they wanted to change in their lives. Also in this session, the establishing Goals was set in where Students began to establish a process goal. Keys to solutions (Sessions 4-6), students was helped to identify solutions (keys to solving their problems) and progress toward goals. Termination (sessions 7-8), here students reviewed the skills they have learned and were helped to continue the progress they made. The counsellor encouraged the students on their changes and promoted their serving as a support system to each other in the future. The Session was ended with refreshments.

NB: appendix VIII

3.6.7.3 Control: This is the third group that didn't receive any form of treatment. The research assistance introduced himself. Invited participants to sit down and made sure the participants were comfortable. He gave them feedback on the instruments administered on them that most of them did not do well. He taught them mathematics topics without any use of instructional materials.

NB: Appendix IX

3.7. Data Collection Procedure

Phase one

Letter of permission was collected from the head of ICEE, Institute of Education. University of Ibadan. The letter was taking to the director in the office of Science and Technology, Ministry of Education to get the list of academically selective schools and academically non-selective schools.

After the collection of this list, the researcher went round the schools in collaboration with the research assistants to seek for the permission of the sampled schools to enable the researcher use their schools for the study.

At the point of the students' entry in first term 2016/2017 academic session, precisely 3 weeks when the students resumed into JSS one, the researcher identified the students' self-concept by administering self-concept scale to the students in the sixty schools that is thirty

academically selective schools and thirty academically non-selective schools. The reason for this step was to decide the level of the students' self-concept and how confident they were before they were admitted to the present schools that is JSS one. Consent was taken from the managements of the selected schools to let the researcher used their schools for the study. The administration of the instrument lasted three weeks.

During the second term, sixty schools took part in the study again. The common entrance examination records of the students were written from the students' individual files from their various schools. The researcher gave them her own mathematics achievement test which covered what the students learnt during the first term, and the second mathematics self-concept (MSC) previously used during the first term was again administered on the students as well. The first and second MSC scores obtained in the first phase were divided by 60 and later converted to percentage. The MAT scores obtained in the first phase was also divided by 20 and converted to percentage. The percentages of first MSC, second MSC and MAT marks were added together and divided by three. The common entrance record of each student was later subtracted from these results (that is the percentages of first MSC, second MSC and MAT divided by three) Student who scored less than 5 in any of the 60 schools was identified. Twelve schools (nine academically selective and three academically non-selective) between eight and twelve students scoring less than 5 were randomly selected. Schools that do not have at least eight students were deleted from the list. In a school where there are more than twelve students with less than 5, only twelve students were randomly selected. Out of the six local governments areas initially used (that is Ibadan North, Ibadan South East, Ibadan South West, Akinyele, Atiba and Oyo East) only four local government areas (that is Ibadan North, Ibadan South East, Ibadan South West and Atiba) met with the selection criteria.

The scores were tabulated (See appendix VI)

3.7.1 Phase two:

The authorities of the selected schools were approached for permission to use their schools for this research.

Before the conclusion of the intervention, five instruments that is MSCS, MAT, SMS, PSEBQ, and SCAS were given equally to the experimental groups and the control group. After the administration of these five instruments to the three groups, experimental groups 1 and 2 were exposed to CBGT, SFBT respectively. The control group were taught some mathematics topics. At the end of the treatment, the researcher administered three instruments

(MSCS, MAT and SCAS) on the three groups that is the experimental groups and the control group.

Eleven weeks were used for the data collection for phase 2. During the first week, the research personnel were trained, second week was used for the identification of the students into experimental and control groups, while the third week was utilized for administration of the pre-test. Eight weeks were used for the treatments and the administration of the post test.

Week 1 ----Training of research personnel

Week 2 ---Students were allocated to experimental as well as control groups.

Week 3 ---Pre-test

Week 4 to Week 10---Treatment

Week 11 ---Post-test

The post-test on Mathematics Self-Concept Scale (MSCS), Mathematics Achievement Test (MAT) and Student's Career Aspiration Scale (SCAS) was administered on the students on the eleventh week.

3.7.2 Training of Participating Research Assistants

The researcher used first week to train the research assistants. The training manual was provided for all the research assistants and the counsellors. The venues for the training were two for convenience purpose. During the training, they were given proper explanation on each of the steps that was used for the administration of the questionnaires and on the areas the counsellor spoke with the students. The instruments administered on the students were MSCS, MAT, SMS, PSEBQ and SCAS. At this stage, all necessary corrections and amendments were taken care of. Toward the end of the preparation, the research assistants administered the instruments on the students.

3.7.3 Students' Orientation and Administration of the Pre-test

All the Mathematics students in the J.S.S.1 classes that were selected from the selected schools were given enlightenment briefing on what they were expected to do. During this time, students' mathematics self-concept and mathematics achievement test were administered on each of them.

3.8 Treatment Procedure/ Packages.

A letter was collected from Institute of Education University of Ibadan and from the Ministry of Education Oyo State. These letters were given to the principals of the twelve schools selected for the study to seek for their permissions to carry out the research in their various schools.

The investigation was carried out in five stages: recruitment and pre-session activities, pre-test' treatment' post-test and evaluation. Before the commencement of the treatments, a short introduction was done with the participants to seek for their full cooperation. At the pre-test stage, Mathematics Self-Concept Scale (MSCS), Mathematics Achievement Test (MAT), Student Motivation Scale (SMS), Parental Socio-Economic Background Questionnaire (PSEBQ) and Student Career Aspiration Scale (SCAS) were administered on all the participants. The treatment packages (Cognitive Behavioural Group Therapy, Solution Focused Brief Therapy and Care As Usual) for eight sessions in eight weeks, were given to the experimental groups within 30 minutes per session while the control group were taught some topics in mathematics for eight sessions in eight weeks.

The details of the treatment packages are given below.

1. For the experimental collection, the cognitive-behavioural group therapy was administered in eight weekly sessions, each of 30 minutes (Table 3.7). The control group were taught some topics in mathematics without any teaching aid

3.8.1 Experimental Group 1 Treatment Manual for Cognitive Behavioural Group Therapy for Students with Low Self-Concept

For the experimental group 1, the cognitive-behavioural group therapy was administered in eight weekly sessions, each of 30 minutes (Table 3.6). The control group did not receive any intervention but they were taught some topics in mathematics.

Table 3.6. **Curriculum of CBGT Sessions.**

Introductory Session – Meeting with teachers and students and Administration of Instrument to obtain Pre-test scores

Session	Subjects
First	Memberships meetingeach other plus enlightening the crowd on the procedure as well as instructions of the meeting plus deliberating the aims of the members. Familiarity and correspondence with students, doing pre-test, proclamation of points, session method and standards.
Unit I	How our thoughts influence our disposition
Second	Speaking about self-concept, self-assurance, as well as features of persons with great self-assurance, features of unconscious opinions, in addition recognising them.
Third	Accepting your opinions plus emotional state deprived of refusing as well as rejecting, talking about your aptitudes also incapacities, looking for response from each individual to the entire crowd as well as about himself at the commencement plus conclusion of the meeting.
Unit II	How our activities influence our mind-set
Fourth	Giving A-B-C model, analysing the association amid unfriendly proceedings, principles, plus disposition variations produced by it, methods of self-agreement, confidence, not seeing incapacities as limits, also the associates' reaction on each individual.
Fifth	Establishing optimistic thoughtful, stating structures of persons by confident thoughtful, dodging negative clarifications, as well as making constructive modifications in lifetime.
Sixth	Stating instances of need plus absence of self-assurance in lifetime by memberships, response of associates on each person, optimistic mental talking plus self-indulgence methods, enlightening the descending sign method to recognise bad fundamental principles.
Unit III	The way our dealings affect our feelings
Seventh	Real habits of exchange of information, confidence, as well as creativity ability exercises through usage acting method.

Eighth	Prepare sensible as well as quantifiable objectives for lifetime 2016, Volume 2. Go over assemblies plus briefing the associates' response about the modifications experience in the course of the meeting as well as on each person plus management of the post- test

NB: (appendix VII)

3.8.2 Experimental Group 1I Treatment Manual for Solution Focused Brief Therapy for Students with Low Self-Concept

For the experimental group II, the solution focused brief therapy was administered in eight weekly meetings, each of 30 minutes (Table 3.7). The control group did not receive any intervention but they were taught somr topics in mathematics.

Table 3.7. **Curriculum of SFBT Sessions.**

Introductory Session – Meeting with teachers and students and Administration of Instrument to obtain Pre-test scores

Session	Subjects
First	Familiarity and correspondence with students, doing pre-test, proclamation of points, session method and standards.
Second	Stating essential standards of arrangement based guiding, educating the gathering and acquainting them with fundamental ideas of solution-focused approach and educating the point exactly, deciding the costs and substantial points
Third	Considering the progressions through focus on show time and time, talking in participants' dialect, making the capacities and gifts extraordinary and applauding the capacities.
Fourth	Concentration on students and use of students ' aptitudes and thoughtfulness regarding inadequacies against capacities.
Fifth	Educating hopeful systems, externalizing the issue and presupposition issue of assistance to individuals to figure out how to externalize the issue.
Sixth	Changing the attitude and thinking style, and discussion about difference in mind-set change to issue were educated.
Seventh	Making the excellent cases remarkable and utilizing the wonder questions and essential vocabulary.

Eighth	Summarising the subject, answering the inquiries at the eight session and administration of the post- test

NB: See appendix VIII

3.8. Control Group 1II: Manual for Control groupfor Students with Low Self-Concept

Curriculum of Control Group Sessions.

Session	Subjects
First	Familiarity and correspondence with students, doing pre-test, proclamation of points, session method and standards.
Second	Students were taught Basic Operations (Addition and Subtraction)
Third	Students were taught Basic Operations (Multiplication and Division)
Fourth	Students were taught Development of Number Systems (Counting)
Fifth	Students were taught Development of Number Systems (Symbols for Numbers)
Sixth	Students were taught Development of Number Systems (The place value system)
Seventh	Students were taught Factors (Highest Common Factors and Lowest Common multiples)
Eighth	Summarising the subject, answering the inquiries at the eight session and administration of the post- test

3.9 Method of Data Analysis

Table 3.9

Phase	Research Questions	Method of Data Analysis
1	1 2 3	Descriptive analysis: Kurtosis Skewness Mean Standard Deviation Frequency Percentage

	Hypotheses	
2	(1-7)	ANOVA Post horc: Bonferonni Estimated Marginal Mean

3.9.1 Method of Data Analysis

The information gathered for the study were classified into pre-test, post-test scores and descriptive statistics for both experimental and control groups.

3.9.2 Method of Data Analysis for Phase One

Descriptive statistics was used to answer the first three research questions.

3.9.3 Method of Data Analysis for Phase Two

Analysis of Covariance (ANCOVA) was used to answer hypotheses one to seven. In addition, Least Significant Difference analysis was used to show how the groups performed and also the difference among the groups if the main effects are significant, it also explained the source of significant difference among the groups where they exist. All hypotheses were tested at 0.05 level of significance.

3.9.4 Methodological challenges

The researcher encountered the following challenges in the course of data collection. The quantity of factors engaged with the investigation resulting in five different instruments to be completed by the participants, the students were reluctant in filling the scales. To overcome this challenge, the researcher involved the teachers who have direct contacts with the students in their various schools to ensure that the instruments were properly filled. Sometimes, the researcher had to wait more than the time scheduled to administer the instruments.

Since the direct participants of the study are first year students in secondary schools, filling the instruments looked so strange to them, it therefore took the researcher extra time to explain the instruments to them.

Due to the thorough supervision going on in Oyo State, at times the researcher was not permitted to have access to the students which slightly extended the time schedule for the administration of the instruments.

CHAPTER FOUR

RESULTS AND DISCUSSION

This presents and examines the results of this investigation. The focal point of the study was to explore the effects of psychological therapies on mathematics self-concept, achievement as well as career aspiration of students associated with big-fish-little-pond, considering students' motivation and students' socio-economic background as moderating variables. This section examines the outcomes acquired from the statistical analysis of data as indicated by the three research questions (3), seven hypothesis (7) formulated for the study.

4.1a Research Question 1a: What is the level of performance of JSS one students in their last common entrance examination from academically and academically non-selective schools?

The common entrance score empowered the specialist to decide the level of performance of the students from their primary schools. This enabled the researcher to categorise the student into either a big fish or small fish from his/her primary school.

Table 4.1: Level of Performance of JSS 1 Students in the Last Common Entrance Examination

Group	Mean	N	SD	Kurtosis	Skewness
Academically non-selective schools	46.48	1053	14.202	-0.213	0.440
Academically selective schools	60.16	972	16.774	-0.685	-0.404

Table 4.1 shows the level of performance of JSS one students in their last common entrance examination from academically and academically non-selective schools. The Table indicated that the academically selective schools performed better than the academically non-selective

schools as indicated by the mean 60.16 which is greater than that of academically non-selective schools 46.48. The negative skewness (-0.404) of the academically selective schools indicated that there are higher scores in academically selective schools compare to the academically non selective schools with positive skewness of 0.440. From Table 4.1, academically non-selective schools have the most kurtosis of -0.213 and academically selective schools have the least kurtosis of -0.685. Also, from Table 4.1, academically selective schools have the greater number of standard deviation of 16.774 than academically non-selective schools which has 14.202.

Discussion

On account to know the level of performance of JSS one students in their last common entrance examination from academically and academically non-selective schools, looking at Table 4.1 higher kurtosis is the after effect of rare outrageous deviations (or outliers) rather than frequent modestly sized deviation. Academically non-selective schools have higher kurtosis (that is higher outliers) of -0.213 than academically selective schools with –0.685. Although both academically selective schools and academically non-selective schools are both platykurtic that is they have broad and uniform distribution and they both have kurtosis less than 3 with fewer and less extraordinary outliers than the normal distribution.

From Table 4.1, academically selective schools' skewness is -0.404, it is moderately skewed to the left (it indicates the left tail is extended in addition maximum of the distribution is at the right) while academically non-selective schools are +0.440, it is moderately skewed to the right (it means the tails is longer and most of the distribution is at the left). Based on these scores, academically selective schools are moderately skewed while academically non-selective schools approximately skewed.

The standard deviation score of academically selective schools is about 17 points away from the mean (i. e. 16.774), while the standard deviation of academically non-selective schools is 14 points away from the mean (i. e. 14.202), it means the standard deviation of academically selective schools is well spread out which indicate that almost all the students from academically selective schools got high scores in their common entrance examination. For the academically non-selective schools the standard deviation score is closed to the mean that tells how tightly around the mean, it means the bell shaped curve is steep, the standard deviation is small it means most of the students from academically non-selective schools got low scores in their common entrance examination. The reason why the mean score, the standard deviation score, the kurtosis and the skewness in the academically selective schools

improved than individuals in the academically non-selective schools is because greatest number of the students in the academically selective schools were admitted to their present schools on merit with higher scores of about 70% and above in their common entrance examination, which is in line with the perception that the score obtained by a student in their common entrance examination could serve as a major factor in predicting academic performance and their levels of self-concept and if truly they deserve to be in academically selective schools or academically non selective schools. These findings corroborate the study of Adegoke (2015) who believed that academically selective schools admit students based upon a great position of previous school success, or an extraordinary position of performance in standardised test scores, and very positive teacher recommendations. It is of the believe that academically selective schools are characterised by their especially severe affirmations rules which describes a great cut off mark in the situation test for applicants planning to secure entrance into the type of schools. The cut off mark for entrance into a part of these schools is for the most part set at around at least 70%. This implies that candidates who were not able to score up to 70% in the placement test won't be conceded. However, this is not true in all the schools. In addition, a good number of the students in academically selective schools are assumed to be of high ability, and ability distribution of students in such schools is assumed to be negatively skewed. In contrast, the ability distribution of students in academically non-selective schools is assumed to bell-shaped or normal. Also, the population of students in the academically non-selective schools is greater than the population of the students from academically selective schools because at the baseline we used intact class and the classroom student ratio is higher in academically non-selective schools than academically selective schools.

The outcome of this finding also support the work of Damon (2007) who found out that students are allocated to academically selective schools based on a test taken in primary school and distinctive kinds of students are conceded into different sorts of secondary school in light of academic capacity to the expiration of primary school. Damon (2007) found that different sorts of selective high school share three highlights: academically capable students and these students has a specialised academic curriculum and, usually, highly-qualified teachers. Damon (2007) assumed that selective schools recommend a propelled academic educational programs and concede competent students and these students are distributed according to a standard uniform distribution.

4.1b Research Question 1b: What is the level of performance of JSS one students in mathematics achievement test from academically and non-academically selective schools after one term of teaching?

The total number of mathematics achievement test administered is 20 in number. The students' scores in this test determine the level of the students' ability in mathematics.

Table 4.2: Level of Performance of JSS One Students in Mathematics Achievement Test

Group	Mean (%)	N	SD	Kurtosis	Skewness
Academically non-selective schools	28.45	1053	13.20	0.97	0.804
Academically selective schools	32.30	972	14.92	0.092	0.518

Table 4.2 shows the level of performance of JSS one students in Mathematics achievement test from academically selective schools and academically non-selective schools. The Table indicates that students in academically selective schools did well compared to individuals in academically non-selective schools as indicated by the mean 32.30 percent which is greater than that of academically non-selective schools 28.45 percent. The positive skewness (0.518) of the academically selective schools indicated that there are fewer lower scores compare to the positive skewness (0.804) of the academically non-selective schools. It can be seen that students from academically selective schools' standard deviation of 14.92% which is greater than the standard deviation 13.20% of academically non-selective schools. Also, the kurtosis of academically non-selective schools 0.804 is greater than that of academically selective schools 0.518 which means academically non-selective schools has infrequent extreme outliers than academically selective schools.

Discussion

The reason why this result is in this way may be because of the way that most of the students from academically selective schools are more brilliant than the students from academically non-selective schools. This can be confirmed from the result of their last common entrance examination which can be found in Table 4.1.

The result of this findings corroborate with Colangelo (1987) who researched middle school students from over the United States, with both low maintenance haul out projects and independent classes for the skilled, they discovered that high-capacity students in the two kinds of projects devoured advanced academic self-concept greater mathematics achievement in academically selective schools than average ability students from academically non-selective schools.

The result of this findings also support the work of Kelly and Jordan (1990) who found out that students with larger amounts of capacity, paying little respect to accessibility of skilled programming, had higher academic self-concept plus higher functioning in mathematics in academically selective schools across studies than their counterpart in academically non-selective schools.

In general, Kelly and Jordan (1990); Pajares and Graham (1999); Ziegler (1996) contemplates with obvious off scores on either capacity or accomplishment tests showed that high skill students from academically selective schools had greater academic self-concept and greater achievement in mathematics than average ability students from academically non-selective schools.

4.2 Research Question 2: What is the trend of JSS one students' score in Mathematics Self-Concept?

Mathematics self-concept was administered on the students twice. The first mathematics self-concept was giving out to the students immediately they resumed into JSS one before they were exposed into any test or examination in JSS I. The second test took place after they had been exposed to the in test in the JSS I class, this is to know how confident the students still feel, think, believe in themselves in light of their performances from their former primary schools and first test in the JSS I class. The second mathematics self-concept is to know if their self-concept has changed after being spent some months in their new environment (JSS I). This also enabled the researcher to identify the students that have been demoralised due to their low self-concept in their new environment (JSS I).

Table 4.3: Trends of JSS One Students' Score in Mathematics Self-Concept

Group	MSCS	Mean	N	SD	Kurtosis	Skewness
Academically non-selective schools	MSCS1	45.89	1053	5.694	5.267	-0.523
	MSCS2	47.43	1053	6.624	1.192	-0.341
Academically selective schools	MSCS1	47.53	972	5.263	1.66	-0.726
	MSCS2	47.11	972	6.51	4.497	0.148

Table 4.2 shows the trends of JSS one students' score in Mathematics Self-Concept from academically and non-academically selective schools. The Table indicates that the academically selective schools had a decreased mathematic self-concept from first test to second test as indicated by the mean (from 47.53 to 47.11) compare to that of academically non-selective schools (from 45.89 to 47.43). Also, the changes in negative skewness (-0.726)

to positive skewness (0.148) of the academically selective schools indicates a decreased mathematic self-concept from first test to second test compare to the changes in lower negative skewness (-0.523) to higher negative skewness (-0.341) of the academically non-selective schools indicates an increased self-concept from first test to second test. This is an indication that there may be a lot of competition for the academically selective schools' students when they got to their new environment.

Discussion

The assumption is that due to the high competition of the students' ability in their new environment, mathematics self-concept nosedived. In a scenario whereby middle school and secondary school start with new faces and lost students searching for their classroom, the surprise of being a small fish in a big pond and the irresistible sinking in home work is common as one arrives the threatening world of high school. The result of these findings corroborates with Marsh (1987) who believed that as a student's transition from one academic environment, which is less competitive than the school setting they move into, this will cause stress on the student as they adjust to the new, likely more homogenous setting. This negative impact might be for the reason that the influence of big-fish-little-pond-effect. The result from this outcome also support the findings of (Barber and Olsen, 2004; Cauley and Jovanovich, 2006; Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, and Iver, 1993; Parker, 2010) who believed that the stress of a student navigating the individual and group dynamics inherent in a school setting is magnified when a student transits a basic or lower school to a junior high school or middle school. This effect can be significant amid the alteration from primary school to secondary school.

The result of this findings also support with the work of Marsh and Hau (2003) who consistently had shown that students in academically selective settings have inferior academic self-concept, lower achievement in mathematics and lower career aspiration compared with individual students of a similar capacity non-selective environments.

The consequence of this discoveries additionally substantiates with the discoveries of Seaton, Craven, and Marsh (2008) who found out that the effect of being in a high-ability school (that is a school where the regular aptitude position of learners is above average) has been found to have bad influence on students over an extensive variety of educational outcomes, such as having lower grade point averages, lower standardised achievement test scores, inferior over-all self-concept, as well as lesser learning as well as career ambitions unlike students of the similar aptitude who go to low-ability schools .

4.3 Research Question 3: What proportion of JSS one student is qualified as big fish in a little pond?

The first and second Mathematics Self-Concept scores obtained in the first phase were converted to percentages. The Mathematics achievement test scores obtained in the first phase was also converted to percentage. The average of first Mathematics Self-Concept, second Mathematics Self-Concept and Mathematics achievement test scores were determined and the common entrance results were subtracted from the average. Student who scored -5 deviations and less in any of the 60 schools was identified. These are the students that were assumed to have low self-concept that have suffered from the effect of big fish little pond. The use of -5 is due to the assumption of α at critical level when it is assumed that 95% or more is used for decision making.

Table 4.4: Proportion of JSS One Student Qualified as Big Fish in a Little Pond

S/N	Schools	Number of Students	Number of Students with -5 Deviation and Less	Location of Schools In Terms of Academically Selective And Academically Non-Selective	Proportion of Big Fish in a Little Pond
1	A	35	12	Academically Selective	34.3
2	B	50	9	Academically Selective	18.0
3	C	43	9	Academically Selective	20.93
4	D	51	12	Academically Selective	23.53
5	E	32	12	Academically Selective	37.50
6	F	58	12	Academically Selective	20.69
7	G	55	12	Academically Selective	21.82
8	H	61	12	Academically Non-Selective	19.67
9	I	48	8	Academically Non-Selective	16.67
10	J	51	11	Academically Selective	21.57
11	K	39	8	Academically Non-Selective	20.51
12	L	46	9	Academically Selective	19.57

Table 4.4 shows the proportion of JSS one student who is qualified as big fish in a little pond. Table 4.4 indicated that most of the academically selective schools have higher proportion numbers of big fish in a little pond except in school B which has 18.0. The reason why we

have up to 9 proportion in academically selective schools is because many students from academically selective schools are big fishes in a little pond, which means students from academically selective schools have issues and this may be because they faced high level of competition in their new environment (JSS I).

Discussion

The result indicates that the proportion of JSS One student qualified as big-fish-little-pond in all schools vary on the collective sum of students in every school compare to the number of Students with -5 Deviations and Less.

The result of this work corroborates with work of Bandura (2008) who found that when a student moves into a new school, there is the possibility that this new environment was "imposed" upon them, resulting in a feeling of lack of control for the student. As a result of this newly imposed situation, the student may "select" to act in either a negative or positive way to it. By reacting negatively, there is evidence to suggest that this transition into a new school will negatively impact his/her self-concept in both academic and sports related areas (Cole et. al, 2001, as cited in Marsh and O'Mara, 2008).

The result of this work also corroborates with the work of Marsh, Koller and Baumert (2001) in a longitudinal study conducted they used three time periods to correlate mathematic achievement as well as academic self-concept. The information were obtained from the Educational Careers and Psychosocial Development in Adolescence in the East and West German School Systems, which brought about 30 mathematics accomplishment scores. Their discoveries bolstered the way that individual science accomplishment positively affects singular mathematics self-concept however that science class accomplishment has a negative outcome on individual mathematics self-concept. Consequently, they found that the negative effects slowly dissipated as the year progressed. The findings of this work also corroborates with the work of Marsh (1987) who used data from Youth in Transition Study, he found that students who enter into a more rigorous academic environment, it negatively impacts their academic self-concept. Marsh elucidates by stating: There is a basic necessity for analyse on what truly occurs once students change from any school location then onto the next school location wherever the average limit level is extremely extraordinary, and on the individual features that possibly might determine exactly how scholars will act in response to this demanding change. In some years back the parents/guardian might have been very rich, but now due to economic situation in the country the parents/ guardian might not be very rich like before which have caused emotional instability among their children and also affected performances in their school works. In addition, due to economic situation in the country,

some of the parents/guardians of these students who were formerly rich might have been affected finantially this might also might have affected the poor performance of their children in their various schools.

4.4 Testing of hypotheses

The outcomes are exhibited and talked about in relation to the hypotheses. Analysis of Covariance (ANCOVA) was used to examine the stated research questions at the 0.05 significance level ($p<0.05$).

4.4.1 Hypotheses (1a): There is no significant main effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) on students' achievement in mathematics.

Table 4.5 shows the main effect of treatment on students' Achievement in mathematics

Table 4.5: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' Achievement in mathematics by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Source	Type III Sum Of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1017.796[a]	12	84.82	7.68	.00	.451
Intercept	944.888	1	944.89	85.55	.00	.433
Pre_Mathematics Achievement Test	39.358	1	39.36	3.56	.06	.031
Treatment	695.169	2	347.58	31.47	.00	.360
Motivation	49.007	1	49.001	4.44	.04	.038
Socio-Economic-Background	19.320	1	19.32	1.72	.19	.015
Treatment X Motivation	.767	2	.384	.04	.97	.001
Treatment X Socio-Economic-Background	49.090	2	24.55	2.19	.12	.038
Motivation X Socio-Economic-Background	4.945	1	4.95	.44	.51	.004
Treatment X Motivation X Socio-Economic-Background	3.312	2	1.66	.15	.86	.003
Error	1237.036	112	11.05			
Total	10891.000	125				
Corrected Total	2254.832	124				

Significant at p<0.05

Table 4.5 shows that the main effect of treatment is significant on students' achievement in mathematics $F_{(2,113)} = 31.470; p < 0.05$. The partial eta squared of 0.360 implies that treatment (cognitive behavioural group therapy, solution focused brief therapy and control) accounts for 36% of the observed variance in the post-test scores of students' achievement in mathematics.

Table 4.6: Estimate Marginal Means and Standard Error: Treatment Groups

TREATMENT	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1 CBGT	6.27[a]	.72	4.8	7.7
2 SFBT	11.74[a]	.57	10.6	12.9
3 CONTROL	6.01[a]	.53	5.0	7.1

Table 4.6 demonstrates that the mean post test scores of students open to solution focused brief therapy is the highest ($\bar{x}$ = 11.74), followed by cognitive behavioural group therapy ($\bar{x}$ = 6.27) and lastly by the control group ($\bar{x}$ = 6.01). It might therefore be incidental that students exposed to solution focused brief therapy exhibited more achievement in mathematics compare to their counterpart in the other groups.

In order to analyse the source(s) of contrast between the treatment groups (solution focused brief therapy, cognitive behavioural group therapy and control), bonfferonni Multiple Range test was used to find out the source of the variation. There was a significant difference at alpha level P<0.05 as illustrated in Table 4.5.

Table 4.7: Pairwise Comparisons of Achievement in Mathematics by Treatments

(I) TREATMENT	(J) TREATMENT	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	U B
1 CBGT	2 SFBT	-5.467*	.915	.000	-7.690	-
	3 CONTROL	.258	.897	1.000	-1.922	
2 SFBT	1 CBGT	5.467*	.915	.000	3.243	
	3 CONTROL	5.725*	.779	.000	3.831	
3 CONTROL	1 CBGT	-.258	.897	1.000	-2.438	
	2 SFBT	-5.725*	.779	.000	-7.619	-

The mean difference amid cognitive behavioural therapy and solution focused brief therapy is -5.467. This result showed that there is significant difference between cognitive behavioural therapy and solution focused brief therapy. Also, the mean difference between cognitive

behavioural therapy and control is .258, which indicates that there was no significant difference between cognitive behavioural therapy and control.

Moreover, the mean difference between solution focused brief therapy and control is 5.725 which also shows a significant difference between solutions focused brief therapy and control. Students exposed to SFBT exhibited Students' Achievement in Mathematics significantly different from the rest of the two groups ($\overline{x}$ = 11.739). Similarly, students exposed to CBGT exhibited mathematics self-concept significantly better ($\overline{x}$ = 6.272) than students exposed to control ($\overline{x}$ = 6.014).

Discussion

Table 4.5 shows that the main effect of treatment is significant on students' achievement in mathematics $F_{(2,113)} = 31.470; p < 0.05$. The partial eta squared of 0.360 infers that treatment (cognitive behavioural group therapy, solution focused brief therapy and control) accounts for 36.0% of the observed variance in the post-test scores of students' mathematics self-concept. The reason why this result is like this is because the treatments that the students undergo improve their mathematics achievement. The outcome of this discovery proves that of Jansen (2005) who observed the influence of "Iready mathematics intervention" on student attainment for students in playschool and first grade. He believed that intervention has become a very vital instrument for teachers to use in order to ensure that all students succeed. The results indicated an optimistic influence of intervention on the increase of the student's feelings regarding their abilities in school and on their mathematics achievement. What can be inferred from most of these studies is the fact that the cognitive-behavioural therapy treatment/intervention like counselling students with poor achievement in mathematics yielded positive results on the students' mathematics achievement.

The result of this work corroborates with Raeisi (2007), in a survey studied the efficacy of cognitive-behavioural therapy on mathematics problem solving performance in female fifth grade students with mathematics disorder in Yazd, showed that there is a significant difference between the mean scores of mathematics problem solving in experimental and control group that is those that received treatment/counselling and those that did not. Generally, cognitive-behavioural therapy can be applied as an effective therapeutic method for the students with mathematics disorder.

The result of this work is in line with a meta-analysis led by Lapan, Aoyagi, and Kayson found that since 1958 investigation has revealed that students that get approach from a school counsellor concerning career planning are more fruitful post-graduation (2007).

The role of the intervention support specialist, impacts students' achievement on their unit assessments, as well as their attitudes toward mathematics in general. During intervention, teachers monitor endangered students more frequently to assess the viability of instructional changes which will improve students' achievement in mathematics.

4.4.2 Hypotheses 1(b): There is no significant main effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) on students' mathematics self-concept.

Table 4.8: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' mathematics self-concept by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Tests of Between-Subjects Effects

Dependent Variable: Post_Self-Concept

Source	Type Iii Sum Of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	9362.357[a]	12	780.196	49.561	.000	.840
Intercept	3145.551	1	3145.551	199.818	.000	.639
Pre_Self-Concept	36.131	1	36.131	2.295	.133	.020
Treatment	7259.118	2	3629.559	230.564	.000	.803
Motivation	17.669	1	17.669	1.122	.292	.010
Socio-Economic-Background	34.445	1	34.445	1.841	.178	.016
Treatment X Motivation	21.875	2	10.938	.695	.501	.012
Treatment X Socio-Economic-Background	10.051	2	5.025	.269	.765	.005
Motivation X Socio-Economic Background	10.344	1	10.344	.553	.459	.005
Treatment X Motivation X Socio-Economic-Background	2.372	2	1.186	.063	.939	.001
Error	1778.857	113	15.742			
Total	241799.000	126				
Corrected Total	11141.214	125				

A. R Squared = .840 (Adjusted R Squared = .823)

Significant at p<0.05

Table 4.8 shows that the main effect of treatment is significant on students' mathematics self-concept $F_{(2,113)} = 230.564; p < 0.05$. The partial eta squared of 0.803 implies that treatment (cognitive behavioural group therapy, solution focused brief therapy and control) accounts for 80.3% of the observed variance in the post-test scores of students' mathematics self-concept.

Table 4.9: Estimated Marginal Means and Standard Error: Treatment Groups

TREATMENT	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
(1) COGNITIVE BEHAVIOURAL GROUP THERAPY	47.541	.863	45.831	49.252
(2) SOLUTION FOCUSED BRIEF THERAPY	49.365	.679	48.019	50.710
(3) CONTROL AS USUAL	30.578	.637	29.315	31.841

Table 4.9 indicates that the mean post test scores of students exposed to solution focused brief therapy is the highest ($\bar{x}$ = 49.365), followed by cognitive behavioural group therapy ($\bar{x}$ = 47.541) and lastly by the control group ($\bar{x}$ = 30.578). It may perhaps be inferred that students open to solution focused brief therapy exhibited more mathematics self-concept compare to their counterpart in the other groups.

In order to inspect the basis of differences amid the treatment groups (solution focused brief therapy, cognitive behavioural group therapy and Care As Usual), Bonferroni Multiple Range test was used to find out the basis of the significance.

Table 4.10: Pairwise Comparisons of Self-Concept by Treatments

(I)Treatment	(J) Treatment	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1 CBGT	2 SFBT	-1.823	1.091	.292	-4.475	.828
	3 CONTROL	16.964*	1.086	.000	14.326	19.602
2 SFBT	1 CBGT	1.823	1.091	.292	-.828	4.475
	3 CONTROL	18.787*	.940	.000	16.503	21.071
3 CAU	1 CBGT	-16.964*	1.086	.000	-19.602	-14.326

2 SFBT	-18.787*	.940	.000	-21.071	-16.503

The mean difference between cognitive behavioural therapy and solution focused brief therapy is -1.823. This outcome disclosed that there is no significant difference between cognitive behavioural therapy and solution focused brief therapy. Also, the mean difference between cognitive behavioural therapy and control is -16.964, which indicates that there was a significant difference amid cognitive behavioural therapy and control.

Moreover, the mean difference between solution focused brief therapy and control is 18.787 which also shows a significant difference between solutions focused brief therapy and control.

Discussion

Table 4.8 specifies that the main effect of treatment is significant on students' mathematics self-concept $F_{(2,113)} = 230.564; p < 0.05$. The partial eta squared of 0.803 suggests that treatment (cognitive behavioural group therapy, solution focused brief therapy and control) accounts for 80.3% of the observed variance in the post-test scores of student's mathematics self-concept. The reason why this result is like this is because the treatments that the students undergo improve their mathematics self-concept. The result of this outcome corroborates that of Kaminsky (2007) who examined the efficacy of an enrichment programme on educational self-perception in gifted students with low self-concept because when gifted students transit to a more rigorous school setting (highly selective schools), their self-concept became very low. The results indicated a constructive influence of intervention upon the increase of the student's feelings regarding their abilities in school and on their mathematics self-concept. What can be inferred from most of these studies is the fact that the cognitive-behavioural therapy treatment/intervention like counselling students with low mathematics self-concept yielded positive results on the students' mathematics self-concept.

Table 4.9 also demonstrates that the mean post test scores of students exposed to solution focused brief therapy is the highest ($\overline{x} = 49.365$), followed by cognitive behavioural group therapy ($\overline{x} = 47.541$) and lastly by the control group ($\overline{x} = 30.578$). The result of this work corroborates with Raeisi (2007), in a survey studied the efficacy of cognitive-behavioural therapy on mathematics problem solving performance in female fifth grade students with mathematics disorder in Yazdi, showed that there is a significant difference amid the mean marks of mathematics problem solving in experimental and control group that is those that received treatment and those that did not. Generally, cognitive-behavioural therapy and solution brief therapy can be applied as a real therapeutic method for the students with mathematics disorder.

The reason is because Solution Focused Brief Therapy solves the students' problem on time unlike Cognitive Behavioural Group Therapy which spends so much time on the history of the problem rather than solving it on time. Similarly, students exposed to Cognitive Behavioural Group Therapy exhibited mathematics self-concept significantly better ($\overline{x}$ = 47.541) than students exposed to control ($\overline{x}$ = 30.578). The reason is because students in the Cognitive Behavioural Group Therapy group had received intervention. The result of this work is in line with a meta-investigation directed by Lapan, Aoyagi, and Kayson (2007) establish that since 1958 investigation has exhibited that students that get supervision from a school therapist concerning profession preparation are more powerful post-graduation. In like manner Lapan, Aoyagi, and Kayson (2007) guided a three-year longitudinal school-to- career think about through twelfth rank learners in a country area, outcomes of the research work exhibited that ambitions to go to college or advance educational preparing were connected to six capacities that are spread out in the Integrative/Contextual Model of Career Development. The six aptitudes that were well-known as convincing appear to be: (1) make helpful self-concept, (2) explore decisions and develop before long noteworthy destinations; (3) redesign the obvious appropriate amid the individual as well as the universe of work; (4) assimilate work planning practices plus professional social capacities into normal exercises; (5) perceive profession pathways of consideration; and (6) end up being hopeful students and self-controlled, enduring students. Scholars that used these six capacities stated emotion contented with instructive knowledge as well as with their subsequent stages past secondary school.

The role of the intervention support specialist, impacts students' achievement on their unit assessments, as well as their attitudes toward mathematics in general. During intervention, teachers monitor at-risk students all the more every now and again to assess the adequacy of instructional changes which will improve students' achievement in mathematics.

Solution Focused Brief Therapy improved students' mathematics self-concept best. This is probably because a solution-focused therapist will strive to recognize the student's qualities so as to enable the student to utilize these qualities in territories where they would like to enhance on their school subject like mathematics unlike Cognitive Behavioural Group Therapy that spend much time on identifying the students' problems rather than providing a quick solution to it. Although, Cognitive Behavioural Group Therapy spend much time to identify students' problems, but it still provides a quick solution to the negative thoughts they have about their academic works.

The results of this study bolster the perspectives of De Shazer, 1988 and Webb, 1999 when they saw that solution–focused brief therapy (SFBT) is a postmodern restorative

framework which centres around helping clients make way out in a direct way inside a compelled measure of period. It relies upon the expectations that clients devise the fundamental characteristics as well as possessions for modification as well as that therapy is best focusing on constructing solutions unique to each student.

Cognitive Behavioural Group Therapy interaction was the next that raised students' mathematics self-concept. This may be because CBGT try to change the students' negative thought in mathematics to positive thought unlike the control group that did not obtain any treatment at all. CBGT interaction was found to be less effective than SFBT interaction in raising students' mathematics self-concept. This could be due to counsellors' inability to have enough time to make use of all the concepts and strategies of CBGT unlike the SFBT which needs very short time to find solution for the students' mathematics self-concept problem.

4.4.3 Hypotheses (1c): **There is no significant main effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) on students' career aspiration.**

Table 4.11 shows the main effect of treatment on students' career aspiration

Table 4.11: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' career aspiration **by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)**

Tests of Between-Subjects Effects

Dependent Variable: Post_Casp

Source	Type Iii Sum Of Squares	Df	Mean Square	F	Sig.	Partial Square
Corrected Model	737.301[a]	12	61.442	9.833	.000	.513
Intercept	1233.212	1	1233.212	197.356	.000	.638
Pre_Casp	4.274	1	4.274	.684	.410	.006
Treatment	149.559	2	74.779	11.967	.000	.176
Motivation	280.070	1	280.070	44.821	.000	.286
Socio-Economic-Background	1.222	1	1.222	.125	.725	.001
Treatment X Motivation	27.802	2	13.901	2.225	.113	.038
Treatment X Socio-Economic-Background	12.129	2	6.064	.620	.540	.011
Motivation X Socio-Economic-Background	5.427	1	5.427	.555	.458	.005
Treatment X Motivation XSocio-Economic-Background	27.030	2	13.515	1.381	.256	.024
Error	699.851	112	6.249			
Total	272044.000	125				
Corrected Total	1437.152	124				

A. R Squared = .513 (Adjusted R Squared = .461)

Significant at p<0.05

Table 4.11 displays that the main effect of treatment is significant on students' career aspiration $F_{(2,112)} = 11.967; p < 0.05$. The partial eta squared of 0.176 implies that treatment (cognitive behavioural group therapy, solution focused brief therapy and control) accounts for 17.6% of the observed variance in the post-test scores of students' career aspiration.

Table 4.12: Estimate Marginal Means and Standard Error: Treatment Groups

TREATMENT	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1 CBGT	44.23	.55	43.15	45.32
2 SFBT	47.56	.43	46.71	48.40
3 CONTROL	46.97[a]	.40	46.18	47.77

Table 4.12 shows that the mean post test scores of students exposed to solution focused brief therapy is the highest ($\bar{x} = 47.56$), followed by the control group ($\bar{x} = 46.97$) and lastly by cognitive behavioural group therapy ($\bar{x} = 44.23$). Solution focused brief therapy is very brief and the contents is simple and easy to understand by students, it might therefore remain concluded that learners open to solution focused brief therapy exhibited more career aspiration compare to their counterparts in the other groups.

In order to observe the basis of differences among the treatment groups (solution focused brief therapy, cognitive behavioural group therapy and control), Benfferoni Multiple Range test was used to determine the source of the variation. There was a significant difference at alpha level $P<0.05$ as illustrated in Table 4.13.

Table 4.13: Post Hoc: Mean Difference Pairwise Comparisons of Treatments

(I) TREATMENT	(J) TREATMENT	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1 CBGT	2 SFBT	-3.32*	.70	.00	-5.02	-1.62
	3 CONTROL	-2.74*	.69	.00	-4.41	-1.07
2 SFBT	1 CBGT	3.32*	.70	.00	1.62	5.02
	3 CONTROL	.58	.58	.95	-.83	2.00
3 CONTROL	1 CBGT	2.74*	.69	.00	1.07	4.41
	2 SFBT	-.58	.58	.95	-2.00	.83

Table 4.13, the mean difference between cognitive behavioural therapy and solution focused brief therapy is -3.32. This result showed that there is significant difference between

cognitive behavioural therapy and solution focused brief therapy. Likewise, the mean difference between cognitive behavioural therapy and control is -2.74, which shows that there was significant difference between cognitive behavioural therapy and control.

Moreover, the mean difference between solution focused brief therapy and control is 3.32 which also shows that there was no significant difference between solutions focused brief therapy and control.

Discussion

Table 4.11 designates that the main effect of treatment is significant on students' career aspiration $F_{(2,113)} = 11.967; p < 0.05$. The partial eta squared of 0.176 suggests that treatment (cognitive behavioural group therapy, solution focused brief therapy and control) accounts for 17.6% of the observed variance in the post-test scores of students' career aspiration. The reason why this result is like this is because the treatments that the students undergo improve their career aspiration. The result of this finding corroborates that of Turner and Lapan (2002), who examined that interventions like CBGT and SFBT anticipated middle school students' interests crosswise over Holland subjects. He believed that intervention has become a very vital instrument for educators to practise so as to safeguard that all students succeed. Lent (1994) found out that secondary school students' confidence in occupations including individuals counselling and thoughts perhaps drives them to pick such occupations. He believed that career intervention is a solid indicator of and middle person between learning encounters and desire for profession decisions in the People/Ideas region. What can be inferred from most of these studies is the fact that the cognitive-behavioural therapy treatment/intervention like counselling students with poor ambitions yielded positive results on the students' career aspiration. In other words, intervention influences one's self-adequacy, which at that point impacts one's career advantages and decisions.

4.4.4 Hypotheses (2a): There is no significant main effect of motivation on students' achievement in mathematics.

Table 4.14: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' Achievement in mathematics by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Source	Type III Sum Of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1017.796[a]	12	84.816	7.679	.000	.451
Intercept	944.888	1	944.888	85.549	.000	.433
Pre_Mathematics Achievement Test	39.358	1	39.358	3.563	.062	.031
Treatment	695.169	2	347.584	31.470	.000	.360
Motivation	49.007	1	49.007	4.437	.037	.038
Socio-Economic-Background	19.320	1	19.320	1.723	.192	.015
Treatment X Motivation	.767	2	.384	.035	.966	.001
Treatment X Socio-Economic-Background	49.090	2	24.545	2.189	.117	.038
Motivation X Socio-Economic-Background	4.945	1	4.945	.441	.508	.004
Treatment X MotivationX Socio-Economic-Background	3.312	2	1.656	.148	.863	.003
Error	1237.036	112	11.045			
Total	10891.000	125				
Corrected Total	2254.832	124				

Significant at p<0.05

Table 4.14 shows that the main effect of motivation on students' achievement mathematics is significant $F_{(1, 113)} = 4.437$; $p>0.05$. This shows that motivation significantly influence students' achievement in mathematics.

Table 4.15: Pairwise Comparison of Achievement in Mathematics by Motivation

MOTIVATION	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound

1 LOW	7.266	.570	6.136	8.396
2 HIGH	8.750	.413	7.931	9.569

Motivation on students' achievement in mathematics was statistically significant.

Table 4.15 shows that the mean of students with high motivation is slightly higher ($\bar{x}$ = 8.750), followed by student with low motivation ($\bar{x}$ = 7.266). That is: high motivated students are greater than low motivated students. It could therefore be inferred that students exposed to high motivation exhibited more achievement in mathematics compare to their counterpart with low motivation.

Discussion

Table 4.14 displays that the main effect of motivation on students' achievement in mathematics was significant $F_{(1, 113)} = 0.037$; $p>0.05$. The reason why this result is like this may be due to the fact that the amount of motivation giving to the students was enough or probably the students found the activity that supposed to motivate them measurable. The result of this work supports the work of Carmichael and Taylor (2005) who originate that inspiration was a robust marker of achievement. In their study, "students ' evaluations on their confidence to viably grasp mathematics questions is based, to a limited extent, on their present level of information and aptitudes, and that this will impact their definitive performance" Their information recommended that students had suppositions about their performance in an up and coming course, and those opinions may have chosen how well they performed notwithstanding understanding the present level of comprehension and dominance of mathematics abilities. This shows that motivation influenced students' achievement mathematics. Also, the student were motivated on the grounds that classroom direction was engaged. For example, the student is focussed and are not adequately fortifying to hold his or her consideration. Motivation works on some students also in the event that he or she has a positive association with the teacher.

These findings supports the researches of Amir.; Etemadi.; Bakhshipour.; Davoodi .; Kvarme ., Franklin., Cheung; Newsom and Mudd 2011 who reflects effectiveness of treatment solution on different variables like students' self-concept, students' motivation, students career aspiration, students' socio-economic background believed that treatment solutions on these variables may have positive impacts on students and helped participants to reduce their problems.

4.4.5 Hypotheses (2b): There is no significant main effect of Motivation on students' mathematics self-concept.

Table 4.16: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' mathematics self-concept by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Tests of Between-Subjects Effects

Dependent Variable: Post_Self-Concept						
Source	Type Iii Sum Of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	9362.357[a]	12	780.196	49.561	.000	.840
Intercept	3145.551	1	3145.551	199.818	.000	.639
Pre_Self-Concept	36.131	1	36.131	2.295	.133	.020
Treatment	7259.118	2	3629.559	230.564	.000	.803
Motivation	17.669	1	17.669	1.122	.292	.010
Socio-Economic-Background	34.445	1	34.445	1.841	.178	.016
Treatment X Motivation	21.875	2	10.938	.695	.501	.012
Treatment X Socio-Economic-Background	10.051	2	5.025	.269	.765	.005
Motivation X Socio-Economic-Background	10.344	1	10.344	.553	.459	.005
Treatment X Motivation X Socio-Economic-Background	2.372	2	1.186	.063	.939	.001
Error	1778.857	113	15.742			
Total	241799.000	126				
Corrected Total	11141.214	125				

A. R Squared = .840 (Adjusted R Squared = .823)

Significant at p<0.05

Table 4.16 displays that the main effect of motivation on students' mathematics self-concept is not significant. This shows that motivation does not significantly influence students' mathematics self-concept. This may be because most of the students may have extrinsic motivation because intrinsically motivated students might not suffer the bad impacts of the BFLPE. In the event that they discover academic tasks compensating all through themselves,

intrinsically motivated students may consider themselves to be additionally accomplished as well as might not discover the activities of the remaining people as intimidating, or probably pertinent, to their self-perspectives. Despite the fact that Lepper (2005) displayed that extrinsic motivation is connected with negative educational outcomes, Otis (2005); Ryan and Deci (2000) has exhibited it to be associated with optimistic educational results. Perhaps if extrinsically motivated students can get the prizes that may motivate them, for instance, high assessments or the approval of educators as well as parents, otherwise if they observe a position of independence in their lead, they in like manner might not bear the bad influence of the BFLPE. In any case, without outer compensation, the BFLPE might remain more noticeable for extrinsically motivated students.

This present finding contradicts the work of connection between educational achievement and motivation (Sikwari 2014) as well as motivation has influence on academic attainment of secondary school students (Tella 2007). Extremely motivated students did well intellectually than poor motivated students (Tella 2007). Regardless of the significance of motivation on the academic of students in mathematics self-concept, this view does not hold in this present work. It means for motivation to have positive effects on students' performances there may be additional variable like counselling to assist the students to be more focused and highly motivated in their school works.

Although students' mathematics self-concept with high motivation was not statistically significant. However, Table 4.17 demonstrates that the mean of students' mathematics self-concept with high motivation is slightly better ($\overline{x}$ = 42.944) than those of students with low motivation ($\overline{x}$ = 42.046). That is, high motivated students are greater than low motivated students. It could in this manner be construed that students exposed to high motivation exhibited more mathematics self-concept compare to their counterpart with low motivation. The findings of this work negate the work of Labouvie-Vief's (2002) theory which assumes that, developing cognitive and ego processes leads to a more differentiated and integrated self-concept. Also Bogels, (2006) and Meshky, (2000) believed that some techniques in cognitive-behavioural therapy are effective for negative thoughts and low self-concepts. Also, from the way things are in the country when those that left higher institution couldn't get good job to put good food on their tables others coming behind may not be motivated to take their school works seriuosly becase they may suppose that even if they get the best grade in the world tho get to higher school of learning they might as well not be able to get god jobs after leaving the universities so they might not be inspired or properly motivated to be take their school works more seriuously.

Table 4.17: Pairwise Comparison of self-concept by Motivation

MOTIVATION	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1 LOW	42.046	.683	40.692	43.399
2 HIGH	42.944	.495	41.963	43.924

Although, motivation on students' mathematics self-concept was not statistically significant. However, Table 4.15 indicates that the mean of students with high motivation is slightly higher ($\overline{x}$ = 42.944), followed by student with low motivation ($\overline{x}$ = 42.046). That is: high motivated students are greater than low motivated students. It may perhaps be conditional that students exposed to high motivation exhibited more mathematics self-concept compare to their counterpart with low motivation.

4.4.6 Hypotheses (2c): There is no significant main effect of motivation on students' career aspiration.

Table 4.18: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' career aspiration **by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)**

Tests of Between-Subjects Effects

Dependent Variable: POST_CASP						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial E Squarec
Corrected Model	737.301[a]	12	61.442	9.833	.000	.513
Intercept	1233.212	1	1233.212	197.356	.000	.638
Pre_Casp	4.274	1	4.274	.684	.410	.006
Treatment	149.559	2	74.779	11.967	.000	.176
Mot	280.070	1	280.070	44.821	.000	.286
Socio-Economic-Background	1.222	1	1.222	.125	.725	.001
Treatment X Mot	27.802	2	13.901	2.225	.113	.038
Treatment X Socio Economic-Background	12.129	2	6.064	.620	.540	.011
Motivation X Socio-Economic-Background	5.427	1	5.427	.555	.458	.005
Treatment X Motivation X Socio-Economic-Background	27.030	2	13.515	1.381	.256	.024
Error	699.851	112	6.249			
Total	272044.000	125				
Corrected Total	1437.152	124				

a. R Squared = .513 (Adjusted R Squared = .461)

Significant at p<0.05

Table 4.18 displays that the main effect of motivation on students' career aspiration is significant $F_{(1, 112)} = 44.821$; $P< 0.05$. The partial eta squared of 0.286 implies that motivation

accounts for 28.6% of the observed variance in the post-test scores of students' career aspiration. This shows that motivation can influence students' career aspiration.

Table 4.19: Pairwise Comparison of career aspiration by Motivation

MOT	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1 LOW	44.477[a]	.428	43.628	45.326
2 HIGH	48.032[a]	.312	47.414	48.650

Table 4.19 demonstrates that the mean of students with high motivation is slightly higher ($\overline{x}$ = 48.032), than the career aspiration of students with low motivation ($\overline{x}$ = 44.477). That is high motivated students are greater than low motivated students. It could therefore be inferred that students exposed to high motivation exhibited more career aspiration compare to their counterpart with low motivation.

Discussion

Table 4.18 demonstrates that the main effect of motivation on students' career aspiration is significant $F_{(1, 112)} = 44.821$; $P < 0.05$. The partial eta squared of 0.286 implies that motivation accounts for 28.6% of the observed variance in the post-test scores of students' career aspiration. The reason why this result is in this way may be because students that are motivated to learn have high mathematics self-concept, high achievement in mathematics which enable them to dream high to have high career aspiration.

The result of this work corroborates with Vallerand, Pelletier, Blais, Brière, Senécal, and Vallières (1992, 1993) on a self-assurance hypothesis point of view, who suggested a lateral version of the motivation that persons have for their school-linked determination as well as assurance. Inside their model, they establish out that intrinsic motivation is conceptualised as a determination that arises from inside, and extrinsic motivation external recompenses and penalties, as well as to keep socially significant standards. Intrinsic and extrinsic motivation are hypothesised to co-exist for an individual; that is, an individual might be both intrinsically and extrinsically motivated to follow a specific educational objective. On the other hand, students with small career result desires will have fewer motivation to endure with their schooling or exceed expectations in their school works. This shows that motivation can influence students' career aspiration positively. In addition to this, students might be well motivated to have good career aspiration when they see NYSC members in their various

schools teaching them, this also may inspire them to work harder so as to become one of them in the future.

4.4.7 Hypotheses (3a): There is no significant main effect of socio-economic background on students' achievement in mathematics.

Table 4.20: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' Achievement in mathematics by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1017.796[a]	12	84.816	7.679	.000	.451
Intercept	944.888	1	944.888	85.549	.000	.433
Pre_Mat	39.358	1	39.358	3.563	.062	.031
Treatment	695.169	2	347.584	31.470	.000	.360
Mot	49.007	1	49.007	4.437	.037	.038
Socio-Economic-Background	19.320	1	19.320	1.723	.192	.015
Treatment X Motivation	.767	2	.384	.035	.966	.001
Treatment X Socio-Economic-Background	49.090	2	24.545	2.189	.117	.038
Motivation X Socio-Economic-Background	4.945	1	4.945	.441	.508	.004
Treatment X Motivation X Socio-Economic-Background	3.312	2	1.656	.148	.863	.003
Error	1237.036	112	11.045			
Total	10891.000	125				
Corrected Total	2254.832	124				

Significant at p<0.05

Table 4.20 shows that the main effect of socio-economic background on students' achievement in mathematics is not significant. This shows that socio-economic background does not significantly influence students' achievement in mathematics.

Table: 4.21: Pairwise Comparison of Achievement in Mathematics by Social-economic Background

Dependent Variable: Mathematics Self-concept Score SOCIO-ECONOMIC-BACKGROUND	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1 LOW	7.767	.467	6.843	8.691
2 HIGH	8.613	.447	7.727	9.499

Although socio-economic background on students' achievement in mathematics was not statistically significant. However, Table 4.21 shows that the mean score on mathematics achievement of students with high social-economic background is slightly higher ($\overline{x}$ = 8.613), than mathematics achievement of students with low social-economic background ($\overline{x}$ = 7.767). It could therefore be inferred that students with high social-economic background exhibited more achievement in mathematics compare to their counterpart with low social-economic background.

Discussion

Table 4.20 demonstrates that the main effect of socio-economic background on students' achievement in mathematics is not significant. The reason why this result is like this may be because their parents did not have much attention for them or may be the students live on the wealth of their parents which might have distracted them to concentrate on their school works. The result of this work negate the work of Gustafsson, (2011) analyses of TIMSS and PIRLS 2011 data revealed that children of more educated parents achieved statistically significant gains than their peers whose parents are not well educated. They reported that guardians with more elevated amounts of training include their children in proficiency exercises to a bigger degree than guardians with lower levels of education. This shows that socio-economic background does not significantly influence students' achievement in mathematics.

The reason may be whether the students do not get enough attention from their parents or guidance. Most of the students that undergo the treatment are the students from academically selective schools and it can be assumed that most of them come from high

socio-economic background; it is possible that their parents focused on their status more than the well-being of their children. It may also be because the students realise that they come from rich home and decided to take their education for granted. The present finding negates the work of **(Nyem, 2007)** who discovered in his work titled Professional Development and Administrative Effectiveness of Principals in Secondary Schools that students with high and low socio-economic background who receive treatment like solution focused brief therapy improve slightly on their mathematics self-concept.

The reason why this result came up like this may be because the students are not too serious about their school works or there is no proper monitoring from their parents due to their tight schedules on the aspect of their own careers. This work negates the work of Ayodele, Adeneye, Awofala and Emiola (2014) who found that there is statistically significant effect of treatment on students' achievement in physics which may probably have effect in mathematics as well.

This work is in line with (Meyer, 1993; Ogunsola and Adewale, 2012; Osunloye, 2008; Schulz, 2005) that parent's socio-economic upbringing effects children' school act in school; in any case, self-inspiration might help or affect these factors' association because a student from a good parental socio-economic background might not attain high academic performance if he/she is not strong-minded to work hard. So, one can be motivated by individual determination or wish to attain achievement. It is possible for students that come from high socio economic background not to high self-concept, probably the situation in the country has affected the economic levels of their parents/guardian which might have affected the students mentally and emotionally. Once the students are not emotionally stable there is no way they will perform very well in their school works. Once they are demoralised, it will affect their achievements in mathematics as well.

4.4.8 Hypotheses (3b): There is no significant main effect of socio-economic background on students' mathematics self-concept.

Table 4.22: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' mathematics self-concept by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Tests of Between-Subjects Effects

Dependent Variable: POST_SELF-CONCEPT

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	9362.357[a]	12	780.196	49.561	.000	.840
Intercept	3145.551	1	3145.551	199.818	.000	.639
Pre_Self-Concept	36.131	1	36.131	2.295	.133	.020
Treatment	7259.118	2	3629.559	230.564	.000	.803
Mot	17.669	1	17.669	1.122	.292	.010
Socio-Economic-Background	34.445	1	34.445	1.841	.178	.016
Treatment X Motivation	21.875	2	10.938	.695	.501	.012
Treatment X Socio-Economic-Background	10.051	2	5.025	.269	.765	.005
Motivation X Socio-Economic-Background	10.344	1	10.344	.553	.459	.005
Treatment X Motivation X Socio-Economic-Background	2.372	2	1.186	.063	.939	.001
Error	1778.857	113	15.742			
Total	241799.000	126				
Corrected Total	11141.214	125				

a. R Squared = .840 (Adjusted R Squared = .823)

Significant at p<0.05

Table 4.22 displays that the main effect of socio-economic background on students' mathematics self-concept is not significant. This shows that socio-economic background does not significantly influence students' mathematics self-concept.

Table 4.23: Pairwise Comparison of self-concept by Social-economic Background

SEB1	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1 LOW	48.505	.597	47.322	49.689
2 HIGH	49.626	.571	48.495	50.758

Although, socio-economic background on students' mathematics self-concept was not statistically significant.

Table 4.23 shows that the mean score on mathematics self-concept of students with high social-economic background is slightly higher ($\overline{x}$ = 49.626), followed by students with low social-economic background ($\overline{x}$ = 48.505). It could therefore be concluded that students with high social-economic background exhibited more mathematics self-concept compare to their counterpart with low social-economic background.

Discussion

From Table 4.22, it demonstrates that main effect of socio-economic background on student's mathematics self-concept is not significant. The reason might be that the parents of the students from the high socio-economic background do not have enough time for them. They may at times leave them with their helpers at home or put them in the boarding schools by spending so much money on them without monitoring their education. This present finding negates the work of Barry, (2005) who observed that individual students who live in astounding neighbourhoods perform better in school over their partners in low quality neighbourhoods. Other studies like (Santrock, 2006) discovered that students whose survives are portrayed via deprived psychological as well as bodily fitness, poor economic prospects will probably have low self-concept in pre-adulthood than their better balanced and more equipped partners. This shows that socio-economic background does not significantly influence students' mathematics self-concept. It can as well remain expected that majority of the students from extraordinary socio-economic upbringing may be students from academically selective schools whose self-concept might have been damaged due to the

effect of big-fish-little-pond. This work also supports the work of Ogunshola (2001) on the impacts of parent financial position on school act of students in designated schools, who found out that students' socio-economic upbringing might not determine students' great school functioning. This discovering contrasts from what was acquired by different analysts. (Eze, 2002, Ronald 2003). Slope (2004) and Rothstein (2004) who declared that position of Parents does not merely have emotional impact on the educational functioning of students but likewise make it incredible for children from little socio-economic upbringing to contest higher with their colleague from high socio-economic upbringing in the similar school setting. They had likewise set further that uneducated and semi-ignorant guardians and parents from low socio-economic background might help their children if they are sufficiently edified about the required accomplishment of their children schooling in such situation, they help and urge their children to be sufficiently engaged with their academic activities and thus give them fundamental needs that may upgrade their performance.

Although socio-economic background on students' mathematics self-concept was not statistically significant. However, from Table 4.23 in the pairwise comparison of self-concept by social-economic background students with high social-economic background is higher ($\overline{x}$ = 49.626), than those of students with low social-economic background ($\overline{x}$ = 48.505). That is, high social-economic background students are greater than low social-economic background students in term of mathematics self-concept. It could therefore be inferred that students with high social-economic background exhibited more mathematics self-concept compare to their counterpart with low social-economic background. The motive intended for this might be possibly scholars who came from high social-economic back ground might experience additional stress to do better at school as well as live up to their parentage' hopes compared to people from low social-economic background. Likewise, high social-economic background learners are most probable going to have parents who are more highly educated. Parents with higher education levels might be capable to offer their children with adapting methodologies. Thus, high-ability students might have the capacity to adapt to the requests and demands of high-capacity classes as well as schools compared with those of students of low socio-economic backgrounds.It is possible for students that come from high socio economic background not to high self-concept, probably the situation in the country has affected the economic levels of their parents/guardian which might have affected the students mentally and emotionally. Once the students are not emotionally stable there is no way they will perform very well in their school works. Once they are demoralised, it will affect their mathematics self-concept as well.

4.4.9 Hypotheses (3c): There is no significant main effect of socio-economic background on students' career aspiration.

Table 4.24: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' career aspiration **by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)**

Tests of Between-Subjects Effects

Dependent Variable: POST_CASP

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	737.301[a]	12	61.442	9.833	.000	.513
Intercept	1233.212	1	1233.212	197.356	.000	.638
Pre_Career Aspiration	4.274	1	4.274	.684	.410	.006
Treatment	149.559	2	74.779	11.967	.000	.176
Motivation	280.070	1	280.070	44.821	.000	.286
Socio-Economic-Background	1.222	1	1.222	.125	.725	.001
Treatment X Motivation	27.802	2	13.901	2.225	.113	.038
Treatment X Socio-Economic-Background	12.129	2	6.064	.620	.540	.011
Motivation X Socio-Economic-Background	5.427	1	5.427	.555	.458	.005
Treatment X Motivation X Socio-Economic-Background	27.030	2	13.515	1.381	.256	.024
Error	699.851	112	6.249			
Total	272044.000	125				
Corrected Total	1437.152	124				

a. R Squared = .513 (Adjusted R Squared = .461)

Significant at p<0.05

Table 4.24 shows that the main effect of socio-economic background on students' career aspiration is not significant. This shows that socio-economic background does not significantly influence students' career aspiration.

Table 4.25: Pairwise Comparison of career aspiration by Social-economic Background

SOCIO-ECONOMIC-BACKGROUND	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1 LOW	46.257	.443	45.381	47.134
2 HIGH	46.472	.414	45.651	47.293

Although socio-economic background on students' career aspiration was not statistically significant. However,

Table 4.25 shows that the mean score on career aspiration of students with high social-economic background is slightly higher ($\overline{x}$ = 46.472), than career aspiration of students with low social-economic background ($\overline{x}$ = 46.257). It could therefore be inferred that students with high social-economic background exhibited high career aspiration compare to their counterpart with low social-economic background.

Discussion

From Table 4.24, It demonstrates that the main effect of socio-economic background on students' career aspiration is not significant. The reason may be that the students take their school works for granted and believed that their parents' socio-economic status may cater for them all including their future careers. It is also possible that they were not properly guided about their future careers. The result of this work negates with the work of (Duncan, Yeung, Brooks-Gunn, and Smith, 1998) look into who establish that family wage is quite connected with a child's school success as well as accomplishment. Nevertheless, the result of this work supports with the research findings of (Milne and Plourde, 2006) on the qualitative study investigated the various home factors of low-Socio-economic background of primary school students possessing high academic achievement. They examined those students from low-Socio-economic background significantly affects student achievement.

Therefore, it is sensed that students of low socio-economic background encounter extra difficulties in attaining achievement in school compared to students of high socio-economic background, but parents of those students from low socio-economic background sometimes make sure they were available to assist, encourage, and participate with their children. Secondly, parents of those from low socio-economic background sometimes see how important they felt it was to have an education and conveyed this to their children by strongly encouraging them and often reminded their children of the need to acquire an education. That students come from high socio-economic background does not guarantee

their high performance in their school works because their parents may not see the need for infinite support and guidance at home as well as reinforcing their children because of their tight schedules to acquire wealth on the detriment of the achievement of their children', which they do not see as a priority.

Continual efforts may be made by all parents from low socio-economic background to set an example for their children of how crucial it was to do well in school. Therefore, educators should not assume that just because a child comes from a low-Socio-economic background socio-economic upbringing they are going to struggle before they achieve like the children from high socio-economic background. Although some families may not have enough materials that their children will need in school but they can still provide them with the little things they will need in school to make them successful in school which can influence their children's career aspiration. Milne and Plourde (2006) examined that most students from low- socio-economic background who are succeeding academically, may have parents who ensure that the students have opportunity to read books as well as writing materials in home-based as well as in the school. It is possible for students that come from high socio economic background not to high self-concept, probably the situation in the country has affected the economic levels of their parents/guardian which might have affected the students mentally and emotionally. Once the students are not emotionally stable there is no way they will perform very well in their school works. Once they are demoralised, it will affect their career aspiration in mathematics as well.

4.10 Hypotheses (4a): There is no significant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' achievement in mathematics?

Table 4.26: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' Achievement in mathematics by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1017.796[a]	12	84.816	7.679	.000	.451
Intercept	944.888	1	944.888	85.549	.000	.433
Pre_Mathematics Achievement Test	39.358	1	39.358	3.563	.062	.031
Treatment	695.169	2	347.584	31.470	.000	.360
Motivation	49.007	1	49.007	4.437	.037	.038
Socio-Economic-Background	19.320	1	19.320	1.723	.192	.015
Treatment X Motivation	.767	2	.384	.035	.966	.001
Treatment X Socio-Economic-Background	49.090	2	24.545	2.189	.117	.038
Motivation X Socio-Economic-Background	4.945	1	4.945	.441	.508	.004
Treatment X Motivation X Socio-Economic-Background	3.312	2	1.656	.148	.863	.003
Error	1237.036	112	11.045			
Total	10891.000	125				
Corrected Total	2254.832	124				

Significant at p<0.05

Table 4.26 shows that there was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' achievement in mathematics $F_{(2,113)} = 0.035$, $p>0.05$.

Discussion

There was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' achievement in mathematics $F_{(2,113)} = 0.966$, $p>0.05$. The reason may be that the reward the students are expecting to get from their parents or their teachers are not strong enough to motivate them, or may be the students are not prepared to work in other to make the motivation objective. The result of this work negate the work of Lewinsohn (1981) who deliberated a collection of applicants ahead some of them developed unhappiness, as well as established that individuals who later developed unhappiness who find out that the interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' mathematics self-concept is positive and significant which later enable the students to perform very well in their academic work

The combination of treatments (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation is not significant on students' achievement in mathematics. Looking at Table 4.5, it shows that treatment is significant on students' achievement in mathematics. Also on Table 4.15 the mean of students with higher motivation is greater than students with low motivation. The situation may perhaps be incidental that learners exposed to high motivation exhibited more achievement in mathematics compare to their counterpart with low motivation.

4.4.11 Hypotheses (4b): There no significant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' mathematics self- concept.

Table 4.27: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' mathematics self-concept by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Tests of Between-Subjects Effects

Dependent Variable: POST_SELF-CONCEPT

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	9362.357[a]	12	780.196	49.561	.000	.840
Intercept	3145.551	1	3145.551	199.818	.000	.639
Pre_Self-Concept	36.131	1	36.131	2.295	.133	.020
Treatment	7259.118	2	3629.559	230.564	.000	.803
Motivation	17.669	1	17.669	1.122	.292	.010
Socio-Economic-Background	34.445	1	34.445	1.841	.178	.016
Treatment X Motivation	21.875	2	10.938	.695	.501	.012
Treatment X Socio-Economic-Background	10.051	2	5.025	.269	.765	.005
Motivation X Socio-Economic-Background	10.344	1	10.344	.553	.459	.005
Treatment X Motivation X Socio-Economic-Background	2.372	2	1.186	.063	.939	.001
Error	1778.857	113	15.742			
Total	241799.000	126				
Corrected Total	11141.214	125				

a. R Squared = .840 (Adjusted R Squared = .823)

Significant at p<0.05

Table 4.27 shows that there was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' mathematics self- concept $F_{(2,113)} = 0.695$, $p>0.05$.

Discussion

There was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' mathematics self-concept $F_{(2,113)} = 0.695$, $p>0.05$.

The combination of treatments (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation is not significant on student's mathematics self-concept. Looking at Table 4.27, it shows that treatment is significant on students' mathematics self-concept. Also on Table 4.15 the mean of students with higher motivation is greater than those students with low motivation. The situation can be supposed that learners with high motivation may have high mathematics self-concept than those with low motivation.

4.4.12 Hypotheses (4c): There no significant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' career aspiration?

Table 4.28: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' careeraspiration by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)
Tests of Between-Subjects Effects

Dependent Variable: POST_CASP

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Squared
Corrected Model	737.301[a]	12	61.442	9.833	.000	.513
Intercept	1233.212	1	1233.212	197.356	.000	.638
Pre_Career Aspiration	4.274	1	4.274	.684	.410	.006
Treatment	149.559	2	74.779	11.967	.000	.176
Motivation	280.070	1	280.070	44.821	.000	.286
Socio-Economic-Background	1.222	1	1.222	.125	.725	.001
Treatment X Motivation	27.802	2	13.901	2.225	.113	.038
Treatment X Socio-Economic-Background	12.129	2	6.064	.620	.540	.011
Motivation X Socio-Economic-Background	5.427	1	5.427	.555	.458	.005
Treatment X Motivation X Socio-Economic-Background	27.030	2	13.515	1.381	.256	.024
Error	699.851	112	6.249			
Total	272044.000	125				
Corrected Total	1437.152	124				

a. R Squared = .513 (Adjusted R Squared = .461)

Significant at p<0.05

Table 4.28 shows that there was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' achievement in mathematics $F_{(2,112)} = 2.225$, $p>0.05$.

Discussion

There was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' career aspiration $F_{(2,113)} = 2.225$, $p>0.05$. The combination of treatments (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation is not significant on students' career aspiration. Looking at Table 4.28 it shows that treatment is significant on students' career aspiration Also on Table 4.11 students who were giving adequate counselling on their poor ambitions yielded positive results on the students' career aspiration. In other words, intervention influences one's self-adequacy, which at that point impacts one's career advantages and decisions. Also, students with higher motivation is greater than students with low motivation. The situation may perhaps be contingent that students exposed to high motivation exhibited more achievement in mathematics compare to their counterpart with low motivation.

4.4.13 Hypotheses (5a): There is no significant two-way interaction effect of treatment and socio-economic background on students' achievement in mathematics.

Table 4.29: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' Achievement in mathematics by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1017.796[a]	12	84.816	7.679	.000	.451
Intercept	944.888	1	944.888	85.549	.000	.433
Pre_Mathematics Achievement Test	39.358	1	39.358	3.563	.062	.031
Treatment	695.169	2	347.584	31.470	.000	.360
Motivation	49.007	1	49.007	4.437	.037	.038
Socio-Economic-Background	19.320	1	19.320	1.723	.192	.015
Treatment X Motivation	.767	2	.384	.035	.966	.001
Treatment X Socio-Economic-Background	49.090	2	24.545	2.189	.117	.038
Motivation X Socio-Economic-Background	4.945	1	4.945	.441	.508	.004
Treatment X Motivation X Socio-Economic-Background	3.312	2	1.656	.148	.863	.003
Error	1237.036	112	11.045			
Total	10891.000	125				
Corrected Total	2254.832	124				

Significant at p<0.05

Table 4.29 shows that there was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and socio-economic background on students' achievement in mathematics $F_{(2,113)} = 2.189$, $p>0.05$.

Discussion

There was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and socio-economic background on students' achievement in mathematics $F_{(2,113)} = 2.189$, $p>0.05$. The combination of treatments (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and socio-economic background on students' achievement in mathematics not significant. Looking at Table 4.21 it shows that the mean score of students with high social-economic background is slightly higher than students with low social-economic background. It could therefore be concluded that students with high social-economic background exhibited more mathematics self-concept compare to their counterpart with low social-economic background.

4.4.14 Hypotheses (5b): There is no significant two-way interaction effect of treatment and socio-economic background on students' mathematics self-concept.

Table 4.30: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' mathematics self-concept by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Tests of Between-Subjects Effects

Dependent Variable: Post_Self-Concept

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	9362.357[a]	12	780.196	49.561	.000	.840
Intercept	3145.551	1	3145.551	199.818	.000	.639
Pre_Self-Concept	36.131	1	36.131	2.295	.133	.020
Treatment	7259.118	2	3629.559	230.564	.000	.803
Motivation	17.669	1	17.669	1.122	.292	.010
Socio-Economic-Background	34.445	1	34.445	1.841	.178	.016
Treatment X Motivation	21.875	2	10.938	.695	.501	.012
Treatment X Socio-Economic-Background	10.051	2	5.025	.269	.765	.005
Motivation X Socio-Economic-Background	10.344	1	10.344	.553	.459	.005
Treatment X Motivation X Socio-Economic-Background	2.372	2	1.186	.063	.939	.001
Error	1778.857	113	15.742			
Total	241799.000	126				
Corrected Total	11141.214	125				

a. R Squared = .840 (Adjusted R Squared = .823)

Significant at p<0.05

Table 4.30 displays that there was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and socio-economic background on students' mathematics self- concept $F_{(2,113)} = 0.269$, $p>0.05$.

Discussion

There was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and

Solution Focused Brief Therapy) and socio-economic background on students' mathematics self- concept $F_{(2,113)} = 0.269$, $p>0.05$. The combination of treatments (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and socio-economic background on students' mathematics self- concept is not significant. Looking at Table 4.23 it shows that the mean score on mathematics self-concept of students with high social-economic background is slightly higher than students with low social-economic background. It could therefore be concluded that students with high social-economic background exhibited more mathematics self-concept compare to their counterpart with low social-economic background.

4.4.15 Hypotheses (5c): There is no significant two-way interaction effect of treatment and socio-economic background on students' career aspiration.

Table 4.31: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' career aspiration **by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)**

Table 4.31:

Tests of Between-Subjects Effects Dependent Variable: POST_CASP

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	737.301[a]	12	61.442	9.833	.000	.513
Intercept	1233.212	1	1233.212	197.356	.000	.638
Pre_Career Aspiration	4.274	1	4.274	.684	.410	.006
Treatment	149.559	2	74.779	11.967	.000	.176
Motivation	280.070	1	280.070	44.821	.000	.286
Socio-Economic-Background	1.222	1	1.222	.125	.725	.001
Treatment X Motivation	27.802	2	13.901	2.225	.113	.038
Treatment X Socio-Economic-Background	12.129	2	6.064	.620	.540	.011
Motivation X Socio-Economic-Background	5.427	1	5.427	.555	.458	.005
Treatment X Motivation X Socio-Economic-Background	27.030	2	13.515	1.381	.256	.024
Error	699.851	112	6.249			
Total	272044.000	125				
Corrected Total	1437.152	124				

a. R Squared = .513 (Adjusted R Squared = .461)

Significant at p<0.05

Table 4.31 shows that there was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and socio-economic background on students' career aspiration $F_{(2,112)} = .620$, $p>0.05$.

Discussion

There was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and socio-economic background on students' career aspiration $F_{(2,112)} = 0.020$, $p>0.05$. Looking at Table 4.21 it shows that the mean score of students with high social-economic background is slightly higher than students with low social-economic background. It could therefore be concluded that students with high social-economic background exhibited more mathematics self-concept compare to their counterpart with low social-economic background.

4.4.16 Hypotheses (6a): There is no significant two-way interaction effect of motivation and socio-economic background on students' achievement in mathematics.

Table 4.32: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' Achievement in mathematics by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1017.796[a]	12	84.816	7.679	.000	.451
Intercept	944.888	1	944.888	85.549	.000	.433
Pre_Mathematics Achievement Test	39.358	1	39.358	3.563	.062	.031
Treatment	695.169	2	347.584	31.470	.000	.360
Motivation	49.007	1	49.007	4.437	.037	.038
Socio-Economic-Background	19.320	1	19.320	1.723	.192	.015
Treatment X Motivation	.767	2	.384	.035	.966	.001
Treatment X Socio-Economic-Background	49.090	2	24.545	2.189	.117	.038
Motivation X Socio-Economic-Background	4.945	1	4.945	.441	.508	.004
Treatment X Motivation X Socio-Economic-Background	3.312	2	1.656	.148	.863	.003
Error	1237.036	112	11.045			
Total	10891.000	125				
Corrected Total	2254.832	124				

Significant at p<0.05

Table 4.32 shows that there was insignificant two-way interaction effect of motivation and socio-economic background on students' achievement in mathematics $F_{(1,112)} = 0.441$, $p>0.05$.

Discussion

There was insignificant two-way interaction effect of motivation and socio-economic background on students' achievement in mathematics F (1,112) = 0.441, p>0.05. The combination of motivation and socio-economic background is not significant on students' achievement in mathematics. Looking at Table 4.15 it shows that the mean of students with high motivation is slightly higher than the career aspiration of students with low motivation. That is high motivated students are greater than low motivated students. The situation may possibly be incidental that scholars exposed to high motivation exhibited more career aspiration compare to their counterpart with low motivation.

4.4.17 Hypotheses (6b): There is no significant two-way interaction effect of motivation and socio-economic background on students' mathematics self-concept.

Table 4.33: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' mathematics self-concept by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Tests of Between-Subjects Effects

Dependent Variable: Post_Self-Concept

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	9362.357[a]	12	780.196	49.561	.000	.840
Intercept	3145.551	1	3145.551	199.818	.000	.639
Pre_Self-Concept	36.131	1	36.131	2.295	.133	.020
Treatment	7259.118	2	3629.559	230.564	.000	.803
Motivation	17.669	1	17.669	1.122	.292	.010
Socio-Economic-Background	34.445	1	34.445	1.841	.178	.016
Treatment X Motivation	21.875	2	10.938	.695	.501	.012
Treatment X Socio-Economic-Background	10.051	2	5.025	.269	.765	.005
Motivation X Socio-Economic-Background	10.344	1	10.344	.553	.459	.005
Treatment X Motivation X Socio-Economic-Background	2.372	2	1.186	.063	.939	.001
Error	1778.857	113	15.742			
Total	241799.000	126				
Corrected Total	11141.214	125				

a. R Squared = .840 (Adjusted R Squared = .823)

Significant at p<0.05

Table 4.33 shows that there was insignificant two-way interaction effect of motivation and socio-economic background on students' mathematics self- concept $F_{(1,113)} = 0.553$, $p>0.05$.

Discussion

There was insignificant two-way interaction effect of motivation and socio-economic background on students' mathematics self- concept $F_{(1,113)} = 1.714$, $p>0.05$. Looking at Table 4.20 it shows that the mean score of students with high social-economic background is slightly higher than students with low social-economic background. It could therefore be concluded that students with high social-economic background are highly motivated to perform very well in mathematics.

The reason may be whether their parents do not have enough time to motivate them in order to achieve greatly in life because parents' motivation and support on students' school work may enable them to perform well in school which will also determine what they will become in the nearest future. The result of this finding negates the work of Woolfolk (1993) who examined that when students are well motivated they have high career aspiration. The result of this work also negates the work of (Bachman and O'Malley, 1986; Marsh, 1984, White (1982) who examined those students from high socio-economic background have high career aspiration.

4.4.18 Hypotheses (6c): There is no significant two-way interaction effect of motivation and socio-economic background on students' career aspiration.

Table 4.34: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' career aspiration **by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)**

Tests of Between-Subjects Effects

Dependent Variable: POST_CASP

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Square
Corrected Model	737.301[a]	12	61.442	9.833	.000	.513
Intercept	1233.212	1	1233.212	197.356	.000	.638
Pre_Career Aspiration	4.274	1	4.274	.684	.410	.006
Treatment	149.559	2	74.779	11.967	.000	.176
Motivation	280.070	1	280.070	44.821	.000	.286
Socio-Economic-Background	1.222	1	1.222	.125	.725	.001
Treatment X Motivation	27.802	2	13.901	2.225	.113	.038
Treatment X Socio-Economic-Background	12.129	2	6.064	.620	.540	.011
Motivation X Socio-Economic-Background	5.427	1	5.427	.555	.458	.005
Treatment X Motivation X Socio-Economic-Background	27.030	2	13.515	1.381	.256	.024
Error	699.851	112	6.249			
Total	272044.000	125				
Corrected Total	1437.152	124				

a. R Squared = .513 (Adjusted R Squared = .461)

Significant at p<0.05

Table 4.34 demonstrates that there was insignificant two-way interaction effect of motivation and socio-economic background on students' career aspiration $F_{(1,112)} = 0.555$, $p>0.05$.

Discussion

There was insignificant interaction effect of motivation and socio-economic background on students' career aspiration $F_{(1,112)} = 0.555$, $p>0.05$. The combination of motivation and socio-

economic background is not significant on students' career aspiration. Looking at Table 4.19 it shows that the mean of students with high motivation is slightly higher than the career aspiration of students with low motivation. That is high motivated students are greater than low motivated students. It could therefore be inferred that students exposed to high motivation exhibited more career aspiration compare to their counterpart with low motivation.

4.4.19 Hypotheses (7a): There is no significant three-way interaction effect of treatment, motivation and socio-economic background on students' achievement in mathematics.

Table 4.35 shows the main effect of treatment on students' Achievement in mathematics

Table 4.35: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' Achievement in mathematics by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1017.796[a]	12	84.816	7.679	.000	.451
Intercept	944.888	1	944.888	85.549	.000	.433
Pre_Mathematics Achievement Test	39.358	1	39.358	3.563	.062	.031
Treatment	695.169	2	347.584	31.470	.000	.360
Motivation	49.007	1	49.007	4.437	.037	.038
Socio-Economic-Background	19.320	1	19.320	1.723	.192	.015
Treatment X Motivation	.767	2	.384	.035	.966	.001
Treatment X Socio-Economic-Background	49.090	2	24.545	2.189	.117	.038
Motivation X Socio-Economic-Background	4.945	1	4.945	.441	.508	.004
Treatment X Motivation X Socio-Economic-Background	3.312	2	1.656	.148	.863	.003
Error	1237.036	112	11.045			
Total	10891.000	125				
Corrected Total	2254.832	124				

Significant at p<0.05

Table 4.35 shows that there was insignificant interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy), motivation and socio-economic background on students' achievement in mathematics $F_{(2,112)} = 0.148$, $p>0.05$.

Discussion

There was insignificant interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy), motivation and socio-economic background on students' achievement in mathematics $F_{(2,112)} = 0.148$, $p>0.05$.

Also in the Pairwise Comparison of Achievement in Mathematics by Social-economic Background in Table 4.21, it is also indicating that the mean score of student's achievement in mathematics with high social-economic background is slightly higher ($\overline{x} = 8.613$), than those of students with low social-economic background ($\overline{x} = 7.767$). That is, high social-economic background students are greater than those of students with low social-economic background in term of students' accomplishment in mathematics. It could therefore be inferred that students with high social-economic background exhibited more achievement in mathematics compare to their counterparts with low social-economic background. The reason may be because parents of those students from high social-economic background provided their children with enough instructional materials like textbooks, computer, calculators, graph books, four figure Tables and so on, unlike their counterpart from low social-economic background, where some of their parents cannot afford to get them all these instructional materials mentioned above.

This present discovering contrasts from what was acquired by different analysts. Eze (2002), Craig Ronald (2003). Slope et al (2004) and Rothstein (2004) who affirmed that position of Parents does not merely have emotional impact on the academic performance of students but likewise make it unbearable for children from low socio-economic upbringing to struggle higher by their partners from extraordinary socio-economic background under the same academic setting. Nevertheless, there is possible explanation that could be proffered to account for the reason why interaction effect of treatment, motivation as well as socio-economic upbringing on student's achievement in mathematics is insignificant the reason might be because the parents of the students from low socio-economic background might be adequate enlightened about the desirable achievement of their children education in such a case, they contribute and inspire their children to be sufficiently concerned in their academic doings and therefore offer them with most important wants that might improve their performance.

4.4.20 Hypotheses (7b): There is no significant three-way interaction effect of treatment, motivation and socio-economic background on students' mathematics self-concept.

Table 4.36: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' mathematics self-concept by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)

Tests of Between-Subjects Effects

Dependent Variable: Post_Self-Concept

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	9362.357[a]	12	780.196	49.561	.000	.840
Intercept	3145.551	1	3145.551	199.818	.000	.639
Pre_Self-Concept	36.131	1	36.131	2.295	.133	.020
Treatment	7259.118	2	3629.559	230.564	.000	.803
Motivation	17.669	1	17.669	1.122	.292	.010
Socio-Economic-Background	34.445	1	34.445	1.841	.178	.016
Treatment X Motivation	21.875	2	10.938	.695	.501	.012
Treatment X Socio-Economic-Background	10.051	2	5.025	.269	.765	.005
Motivation X Socio-Economic-Background	10.344	1	10.344	.553	.459	.005
Treatment X Motivation X Socio-Economic-Background	2.372	2	1.186	.063	.939	.001
Error	1778.857	113	15.742			
Total	241799.000	126				
Corrected Total	11141.214	125				

a. R Squared = .840 (Adjusted R Squared = .823)

Significant at p<0.05

Table 4.36 shows that there was insignificant three-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy), motivation and socio-economic background on students' mathematics self- concept $F_{(2,113)} = 0.063$, $p>0.05$.

Discussion

There was insignificant three-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy), motivation and socio-economic background on students' mathematics self- concept $F_{(2,113)} = 0.063$, $p>0.05$. The three-way interaction effect of treatment, motivation and socio-economic background on students' mathematics self-concept was insignificant.

4.4.21 Hypotheses (7c): There is no significant three-way interaction effect of treatment, motivation and socio-economic background on students' career aspiration.

Table 4.37: Summary of 3x2x2 Analysis of Covariance (ANCOVA) of Students' career aspiration **by Treatment (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy)**

Tests of Between-Subjects Effects

Dependent Variable: POST_CASP

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	737.301[a]	12	61.442	9.833	.000	.513
Intercept	1233.212	1	1233.212	197.356	.000	.638
PRE_CAREER ASPIRATION	4.274	1	4.274	.684	.410	.006
TREATMENT	149.559	2	74.779	11.967	.000	.176
MOTIVATION	280.070	1	280.070	44.821	.000	.286
SOCIO-ECONOMIC-BACKGROUND	1.222	1	1.222	.125	.725	.001
TREATMENT X MOTIVATION	27.802	2	13.901	2.225	.113	.038
TREATMENT X SOCIO-ECONOMIC-BACKGROUND	12.129	2	6.064	.620	.540	.011
MOTIVATION X SOCIO-ECONOMIC-BACKGROUND	5.427	1	5.427	.555	.458	.005
TREATMENT X MOTIVATION X SOCIO- ECONOMIC-BACKGROUND	27.030	2	13.515	1.381	.256	.024
Error	699.851	112	6.249			
Total	272044.000	125				
Corrected Total	1437.152	124				

a. R Squared = .513 (Adjusted R Squared = .461)

Significant at p<0.05

Table 4.37 shows that there was insignificant three-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy), motivation and socio-

economic background on students' career aspiration $F_{(2,112)} = 1.381$; $P > 0.05$.It means the combination of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy), motivation and socio-economic background does not have any significant effect on students' career aspiration. The reason why the combination of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy), motivation and socio-economic background didn't have any significant effect on students' career aspiration could be because of the unemployment rate in the country. Most graduate that left schools didn't get good job, this might serves as a source of discouragement to upcoming students most espeacially students from secondary schools not to take their school works more seriously.

CHAPTER FIVE

SUMMARY CONCLUSION AND RECOMMENDATIONS

Founded on the outcome emphasised in chapter four, this chapter offers summary of the discoveries, conclusion founded on the findings and proffer some recommendations for improvement.

5.1 Summary of Findings

The investigation examined effects of psychological therapies on mathematics self-concept, achievement and career aspiration of students associated with big-fish-little-pond in junior secondary schools in Oyo State. The study is to examine how the psychological construct (Cognitive behavioural group therapy (CBGT) and Solution Focused Brief therapy (SFBT) and Socio-economic background of students influence the students' achievement as well as students' career aspiration. The study adopted survey method with total population of 64,776 from which 3008 students were sampled both in academically selective and academically non- selective schools. Quasi-experimental design and Factorial design for the study was 3 X 2 X 2 with the total subjects of 126 participants. One record format and eight instruments were designed to gather info for the study including the therapy as well as the instruments were validated using appropriate validation procedures. Descriptive statistics and analysis of covariance) were used to examine the information collected. The result reveal;

1. The study revealed that the academically selective schools performed better than the academically non-selective schools as indicated by the mean 60.16 which is greater than that of academically non-selective schools 46.48. Also, the negative skewness (-0.404) of the academically selective schools indicated that there are higher scores compare to the positive skewness (0.440) of the academically non-selective schools. Also, academically non-selective schools have the most kurtosis of -0.213 and academically selective schools have the least kurtosis of -0.685. Also, academically selective schools have the greater number of standard deviation of 16.774 than academically non-selective schools which has 14.202.
2. The study revealed that the academically selective schools performed better than the academically non-selective schools as indicated by the mean 6.46 which is greater than that of academically non-selective schools 5.69. However, the positive skewness (0.518) of the academically selective schools indicated that there are fewer lower scores compare to the positive skewness (0.804) of the academically non-selective schools.

3. The study revealed that the academically selective schools had a decreased mathematic self-concept from first test to second test as indicated by the mean (from 47.53 to 47.11) compare to that of academically non-selective schools (from 45.89 to 47.43). Also, the changes in negative skewness (-0.726) to positive skewness (0.148) of the academically selective schools indicates a decreased mathematic self-concept from first test to second test compare to the changes in higher negative skewness (-0.523) to lower negative skewness (-0.341) of the academically non-selective schools indicates an increased self-concept from first test to second test.
4. The study revealed that most of the academically selective schools have higher proportion numbers of big fish in a little pond except in school B which has 18.0. It means students from academically selective schools have issues and this may be because they faced high level of competition in their new environment (JSS I).
5. The study revealed that main effect of treatment is significant on students' mathematics self-concept, students' achievement in mathematics and students' career aspiration.
6. The main effect of motivation on students' mathematics self-concept, students' achievement in mathematics and students' career aspiration is not significant.
7. The main effect of socio-economic background on students' mathematics self-concept, students' achievement in mathematics and students' career aspiration is not significant.
8. There was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation on students' mathematics self- concept, students' achievement in mathematics and students' career aspiration.
9. There was insignificant two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and socio-economic background on students' mathematics self- concept, students' achievement in mathematics and students' career aspiration.
10. The study revealed that there was insignificant three-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy), motivation and socio-economic background on students' mathematics self- concept, students' achievement in mathematics and students' career aspiration.
11. Socio-economic background has no direct influence on students' self-concept, career aspiration and mathematics achievement in the model that explain effect of

psychological therapy and students' socio-economic background on students, mathematics achievement and career aspiration.

12. Students' career aspiration could also be influence by treatment type through mathematics self-concept as well as achievement in mathematics.
13. The Main effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) was significant on students' mathematics self-concept, students' achievement in mathematics and students' career aspiration.
14. The Main effect of motivation was not significant on students' mathematics self-concept but it was significant on students' achievement in mathematics. The Main effect of motivation was significant on students' career aspiration.
15. The Main effect of socio economic background was not significant on students' mathematics self-concept, students' achievement mathematics and students' career aspiration.
16. The two-way interaction effect of treatment and socio economic background was not significant on students' achievement in mathematics, students' mathematics self-concept and students' career aspiration.
17. The two-way interaction effect of motivation and socio economic background was not significant on students' mathematics self-concept, students' achievement in mathematics and students' career aspiration.
18. The three-way interaction effect of treatment, motivation and socio economic background was not significant on students' mathematics self-concept, students' achievement in mathematics and students' career aspiration.
19. The two-way interaction effect of treatment (Cognitive Behavioural Therapy and Solution Focused Brief Therapy) and motivation was not significant on students' achievement in mathematics, students' career aspiration and students' mathematics self- concept.

5.2 Conclusion

In light of the result of the investigation, it could be presumed that students' mathematics self-concept, students' achievement in mathematics and students' career aspiration could be significantly improved by the two interventions (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy). The study also found that Solution Focused Brief Therapy Cognitive Behavioural Group Therapy were found to be highly effective. This study also

established that the mean scores of students' mathematics self-concept from academically selective schools were a bit lowered than the mean scores of their counterpart from academically non selective schools after some time in their various schools. Students from academically selective schools should be counselled from time to time so that they do not suffer from the effect of big-fish-little-pond.

5.3 Implications of the Findings of the study

The results of the investigation have implications for stakeholders in the field of education:

1. Cognitive behavioural Group therapy and solution focused brief therapy interventions are all capable of significantly improving students' mathematics self-concept, students' achievement in mathematics and students' career aspiration in the secondary schools. Therefore, we could say that any of the two interventions is good and can be used for improving students' mathematics self-concept, students' achievement in mathematics and students' career aspiration.
2. A hierarchy was discovered in the capabilities of the two interventions in improving students' mathematics self-concept, students' achievement in mathematics and students' career aspiration, with solution focused brief therapy intervention emerging as the best. This implies that the government and all other education agencies should encourage the school counsellors, by motivating them, to embrace regular counselling of the students. Also, government should employ more counsellors to the schools to help improving the academic standard of the students.
3. When solution focused brief therapy intervention is used as the means of improving students' mathematics self-concept, students' achievement in mathematics and students' career aspiration, all the sessions should be followed by the counsellors to ensure that students benefit what they learned during the counselling process when back in the classrooms with their peers.
4. The cognitive behavioural group therapy intervention is thorough and involves much times, when the intervention is used as the means of improving students' mathematics self-concept, students' achievement in mathematics and students' career aspiration, enough time should be allocated for its use in schools and all the sessions and the contents should be followed and completed by the counsellors to ensure that students benefit what they learned during the counselling process when back in the classrooms with their peers.

5. Mathematics self-concept of students from academically selective schools dropped after some times in their school unlike their counterpart from academically non selective schools, counsellors should find a way of counselling the students so that they are not demoralised when they get to more competitive schools.
6. Education policy makers and curriculum planners should endeavour to include counselling sections into the syllabus of the students, so that counselling will be part and parcel of the students in secondary schools. Also, more counsellors should be employed in all the schools.
7. Teachers are directly related to the students in the classrooms more than the counsellors, this implies that the government and other education development agencies should regularly organised workshops, seminars, conferences and meetings for the teachers to enable them to improve their association with their students in other to avoid unnecessary social comparison among the students when they are discharging their duties.
8. It is noteworthy to point out that this study has identified the impacts of psychological therapies on mathematics self-concept, achievement and career aspiration of students associated with big-fish-little-pond so as to know how to reduce the deprived functioning of students in mathematics as well as how government can help these students to realize their goals by employing counsellors to schools in order to get appropriate intervention that will support their mathematics self-concept.
9. The outcome of this investigation will permit the educational programs organizers incorporate essential instructive abilities, social aptitudes and all the more vitally trial training in the educational programs. The study, therefore, raises challenges to counselling psychologists to take note of those socio-psychological variables that can enhance the performance of students in mathematics. It has also provided empirical basis for asserting the predictive effects of counselling services on students' performance in mathematics so as to plan for different kinds of effective intervention programmes.

5.4 Limitation of the Study

The generalization of the results, implications and recommendations of this study may be limited by an amount of factors including the following:

1. The study used intact classes so as not to disrupt the school schedules. This eventually did not allow for randomisation of the participants involved in the study.
2. Only public schools were considered in this study. The effects of all the variables from private secondary schools not considered in this study. This may possibly put limitation on generalization of the findings.

3. Due to the amount of variables involved in the investigation resulting in five different instruments to be completed by the participants, the students were reluctant in filling the scales because of the length of time required and their teachers who have direct contacts with the students in their various schools refused to help the researcher to ensure that the instruments were properly filled on time. Sometimes, the researcher had to wait more than the time scheduled to administer the instruments.
4. Since the aim participants of the investigation are first year students in secondary schools, filling the instruments looked so strange to them, it therefore took the researcher extra time to explain the instruments to them.
5. Due to the thorough supervision going on in Oyo State, at times the researcher was not permitted to have access to the students which slightly extended the time schedule for the administration of the instruments.
6. Researcher faced a lot of challenges in getting vital documents (lists of academically selective schools and academically non-selective schools) that were used for the research work
7. Most of the school authorities did not co-operate with the researcher because they see the researcher as disrupting their normal school programs

5.5 Recommendations of the study

In perspective of the disclosures and conclusion of this investigation, the accompanying proposals were made

1. Since students' mathematics self-concept, students' achievement in mathematics and students' career aspiration could be significantly improved by the two interventions (Cognitive Behavioural Group Therapy and Solution Focused Brief Therapy), it could be recommended that these two interventions should be used in schools.
2. It was found out that Solution Focused Brief Therapy seems to be the most effective among the two interventions in the study; it could be recommended that it should be used regularly in schools.
3. This study established that the mean scores of students' mathematics self-concept from academically selective schools were a bit lowered than the mean scores of their counterpart from academically non selective schools after some time in their various schools. It could be recommended that students from academically selective schools should be counselled from time to time so that they do not suffer from the effect of big-fish-little-pond.

4. This study therefore suggests that since the issue of low performance of students in mathematics is a state and nation-wide problem, it needs to be dealt with by the entire civilisation. It needs possessions that go beyond school as well as solutions that need a collective method – the joint struggles of students, Parents, therapists and managers, network founded association (NGOs) and additionally International Bodies in collaboration with the Federal, State as well as Local administrations.
5. Students ought to be urged to coordinate optimistic self-concept to Mathematics with great functioning in Mathematics.
6. Mathematics teachers must develop in their students' certain self-concept towards Mathematics with a specific end goal to give cautious thought to critical thinking abilities for better functioning in the subject.
8. School ought to enlarge targeted students' individual opinions of their career and education potential and chances.
9. School ought to use an interdisciplinary gathering of expert, academic and support personnel force to plan and screen educational programs to give additional instructional help to students.

5.6 Contribution to Knowledge

This investigation has made significant commitments to information in a number of ways;

1. Identification of big fish in little pond
2. The findings of the study have shown that Cognitive behavioural group therapy and solution focused brief therapy interventions can be effectively use in schools in preventing poor performance of students in learning and attempting examination questions in mathematics by raising the mathematics self-concept of little fish in big pond.
3. The findings of the study have shown that Cognitive behavioural group therapy and solution focused brief therapy interventions can be effectively use in schools in preventing poor performance of students in learning and attempting examination questions in mathematics by raising the mathematics achievement of big fish in little pond.
4. The findings of the study have shown that Cognitive behavioural group therapy and solution focused brief therapy interventions can be effectively use in schools in preventing poor performance of students in learning and attempting examination

questions in mathematics by reforming the mathematics career aspiration of big fish in little pond.

5. This study has been able to provide empirical data that can be used by school counsellors, psychologist, researchers and students, examination board, curriculum planners, Mathematics Association of Nigeria (MAN) and other professionals in related fields in providing help to prevent poor performance of students and ability to work independently.
6. The discoveries of the study have demonstrated that students from academically selective schools can suffer from the effects of big-fish-little-pond.
7. It provided empirical data to equip counselling psychologists, social workers and stakeholders to restructure the education sector so that the goals of secondary education as supported in the national policy will be realized. It will help the stakeholder to adopt an effective intensive intervention programmes that will solve the problem of students' poor performance in mathematics in educational system.
8. Since the two therapies (Cognitive behavioural group therapy and solution focused brief therapy)were discovered to be effevtive, students from academically selectyive schools should be cunselled from time to time so that they will not have problem with comparing their performances with their coleagues which will enable them to perform wonderfully well in mathematics.

5.7 Suggestion for Further Studies

In light of the finding of this investigation, the accompanying recommendations are made for further studies.

1. Further study of this type should randomly select the participants
2. Only public schools were considered in this study. Study of this type should be done in private secondary schools to be able to avoid limitation on conclusion of the outcomes.
3. A longitudinal study (more than three terms used) may be conducted on the impact of Cognitive behavioural group therapy, solution focused brief therapy and Care As Usual interventions on students' mathematics self-concept, students' achievement in mathematics and students' career aspiration.
4. It is perceived that Cognitive behavioural group therapy intervention involves more contents and time than solution focused brief therapy intervention which made it less

effective in the study. Empirical studies could establish this by making use of all the contents with all the time allocated for each session in the school environment.

5. Dependent variables other than students' mathematics self-concept, students' achievement in mathematics and students' career aspiration can be built into further studies to be able to widen the scope of the current results.
6. Since students' motivation and students' socio economic background were used as the moderating variables a similar study could be conducted using other student characteristics apart from these two as the moderating variables, or combine these two variables with some other student variables.
7. The study proposed to examine the effects of psychological therapies on mathematics self-concept, achievement and career aspiration of students associated with big-fish-little-pond of students in Oyo State, Nigeria. The research utilised a survey approach, quasi-experimental approach to gather data for the study. It is, therefore, suggested that the study be carried out in qualitative approach to revalidate the results of the study.

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Mathematics Self-concept Scale (MSCS)

APPENDIX A

Initial Reliability Statistics:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
A1	60.68	35.339	.472	.707
A2	60.77	37.640	.188	.730
A3	60.47	37.643	.296	.722
A4	60.80	37.790	.197	.729
A5	60.68	35.983	.331	.718
A6	60.88	36.681	.188	.734
A7	60.77	38.080	.175	.730
A8	60.93	39.724	-.018	.746
A9	60.82	38.966	.089	.736
A10	60.52	36.017	.423	.711
A11	60.53	38.016	.196	.728

A12	60.85	36.570	.340	.718
A13	60.73	37.758	.216	.727
A14	60.62	35.935	.335	.718
A15	60.95	37.438	.253	.724
A16	60.68	33.678	.573	.695
A17	60.67	32.972	.646	.687
A18	60.38	36.613	.342	.718
A19	60.70	36.722	.212	.730
A20	60.35	35.181	.496	.705

Cronbach's Alpha: 0.731 Mean: 63.88 Variance: 40.139 Std. Deviation: 6.336

Mathematics Self-concept Scale (MSCS)

APPENDIX B

Reliability: final

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
A1	60.68	35.339	.472	.707
A2	60.47	37.643	.296	.722
A3	60.80	37.790	.197	.729
A4	60.68	35.983	.331	.718
A5	60.52	36.017	.423	.711
A6	60.53	38.016	.196	.728
A7	60.85	36.570	.340	.718
A8	60.73	37.758	.216	.727
A9	60.62	35.935	.335	.718
A10	60.95	37.438	.253	.724
A11	60.68	33.678	.573	.695
A12	60.67	32.972	.646	.687
A13	60.38	36.613	.342	.718

A14	60.70	36.722	.212	.730
A15	60.35	35.181	.496	.705

Cronbach's Alpha: 0.938 Mean: 87.11 Variance: 54.731 Std. Deviation: 8.64

MATHEMATICS ACHIEVEMENT TEST
APPENDIX A

S/N	Content	Cognition	Effectiveness of distraction						Difficulty	Discrimination	Point-biserial correlation	Key
			OMIT	A	B	C	D	E				
	NUMBER and NUMERATION	KNOWLEDGE	0.000	0.062	0.037	0.099	0.605	0.198	0.605	0.308	0.295	D
	NUMBER and NUMERATION	APPLICATION	0.000	0.469	0.037	0.407	0.037	0.049	0.469	0.620	0.495	A
	NUMBER and NUMERATION	APPLICATION	0.000	0.037	0.037	0.025	0.889	0.012	0.889	0.048	0.226	D
	NUMBER and NUMERATION	APPLICATION	0.012	0.469	0.111	0.160	0.136	0.111	0.160	0.012	0.111	C
	NUMBER and NUMERATION	APPLICATION	0.000	0.407	0.074	0.099	0.037	0.383	0.383	0.529	0.345	E
	BASIC OPERATION	APPLICATION	0.012	0.210	0.506	0.111	0.074	0.086	0.506	0.526	0.466	B
	NUMBER and NUMERATION	KNOWLEDGE	0.000	0.099	0.037	0.111	0.173	0.580	0.580	0.510	0.386	E
	BASIC OPERATION	KNOWLEDGE	0.025	0.210	0.049	0.136	0.407	0.173	0.407	0.233	0.225	D
	BASIC OPERATION	KNOWLEDGE	0.000	0.173	0.370	0.296	0.136	0.025	0.296	0.281	0.358	C
	NUMBER and NUMERATION	COMPREHENSION	0.000	0.136	0.432	0.148	0.025	0.259	0.259	0.438	0.463	E
	BASIC OPERATION	KNOWLEDGE	0.000	0.025	0.074	0.753	0.049	0.099	0.753	0.322	0.32	C
	ALGEBRAIC PROCESSES	COMPREHENSION	0.000	0.049	0.568	0.062	0.086	0.235	0.235	0.438	0.444	E
	NUMBER and NUMERATION	APPLICATION	0.000	0.037	0.025	0.160	0.642	0.136	0.642	0.207	0.114	D
	BASIC OPERATION	APPLICATION	0.000	0.321	0.370	0.086	0.148	0.074	0.321	0.389	0.358	A
	ALGEBRAIC PROCESSES	KNOWLEDGE	0.000	0.160	0.198	0.198	0.370	0.074	0.370	0.414	0.414	D
	BASIC OPERATION	APPLICATION	0.000	0.198	0.272	0.272	0.173	0.086	0.272	0.337	0.343	B
	BASIC OPERATION	APPLICATION	0.000	0.210	0.198	0.111	0.420	0.062	0.062	-0.031	-0.058	E
	ALGEBRAIC PROCESSES	KNOWLEDGE	0.012	0.247	0.198	0.247	0.284	0.012	0.284	-0.019	0.068	D
	ALGEBRAIC PROCESSES	KNOWLEDGE	0.025	0.580	0.111	0.012	0.086	0.185	0.086	0.084	0.245	D
	ALGEBRAIC PROCESSES	APPLICATION	0.037	0.296	0.025	0.123	0.160	0.358	0.296	-0.120	-0.145	A
	ALGEBRAIC	KNOWLEDGE	0.000	0.099	0.210	0.259	0.086	0.346	0.210	0.082	0.092	

	PROCESSES											B
	GEOMETRY and MENSURATION	KNOWLEDGE	0.012	0.185	0.049	0.099	0.235	0.420	0.420	0.296	0.326	E
	GEOMETRY and MENSURATION	KNOWLEDGE	0.000	0.259	0.420	0.198	0.062	0.062	0.062	0.084	0.255	D
	ALGEBRAIC PROCESSES	APPLICATION	0.000	0.309	0.333	0.099	0.210	0.049	0.333	0.337	0.294	B
	NUMBER and NUMERATION	KNOWLEDGE	0.000	0.148	0.383	0.284	0.185	0.000	0.185	0.214	0.216	D
	GEOMETRY and MENSURATION	APPLICATION	0.000	0.037	0.025	0.889	0.037	0.012	0.889	-0.022	-0.003	C
	GEOMETRY and MENSURATION	APPLICATION	0.025	0.111	0.395	0.370	0.025	0.074	0.370	0.428	0.481	C
	ALGEBRAIC PROCESSES	APPLICATION	0.025	0.074	0.296	0.198	0.235	0.173	0.074	0.014	0.016	A
	GEOMETRY and MENSURATION	COMPREHENSION	0.025	0.198	0.346	0.185	0.074	0.173	0.173	0.036	0.202	E
	GEOMETRY and MENSURATION	APPLICATION	0.037	0.148	0.086	0.272	0.383	0.074	0.383	0.212	0.234	D

Average difficulty: 0.336

KR 20: 0.55

MATHEMATICS ACHIEVEMENT TEST

APPENDIX B

S/N	Content	Cognition	Difficulty	Discrim	r_{pbc}	OMIT	A	B	C	D	E
1	NUMBER and NUMERATION	KNOWLEDGE	0.600	0.241	0.318	0.000	0.062	0.037	0.099	0.605	0.198
2	NUMBER and NUMERATION	APPLICATION	0.400	0.551	0.490	0.000	0.469	0.037	0.407	0.037	0.049
3	NUMBER and NUMERATION	APPLICATION	0.300	0.650	0.472	0.000	0.407	0.074	0.099	0.037	0.383
4	BASIC OPERATION	APPLICATION	0.500	0.716	0.489	0.012	0.210	0.506	0.111	0.074	0.086
5	NUMBER and NUMERATION	KNOWLEDGE	0.500	0.460	0.383	0.000	0.099	0.037	0.111	0.173	0.580
6	BASIC OPERATION	KNOWLEDGE	0.400	0.163	0.241	0.025	0.210	0.049	0.136	0.407	0.173
7	BASIC OPERATION	KNOWLEDGE	0.200	0.345	0.357	0.000	0.173	0.370	0.296	0.136	0.025
8	NUMBER and NUMERATION	COMPREHENSION	0.200	0.593	0.524	0.000	0.136	0.432	0.148	0.025	0.259
9	BASIC OPERATION	KNOWLEDGE	0.700	0.434	0.378	0.000	0.025	0.074	0.753	0.049	0.099
10	ALGEBRAIC PROCESSES	COMPREHENSION	0.200	0.436	0.498	0.000	0.049	0.568	0.062	0.086	0.235
11	NUMBER and NUMERATION	APPLICATION	0.600	0.158	0.093	0.000	0.037	0.025	0.160	0.642	0.136
12	BASIC	APPLICATION	0.300	0.402	0.388	0.000	0.321	0.370	0.086	0.148	0.074

	OPERATION										
13	ALGEBRAIC PROCESSES	KNOWLEDGE	0.300	0.584	0.429	0.000	0.160	0.198	0.198	0.370	0.074
14	BASIC OPERATION	APPLICATION	0.200	0.226	0.366	0.000	0.198	0.272	0.272	0.173	0.086
15	BASIC OPERATION	APPLICATION	0.200	-0.005	0.027	0.000	0.099	0.210	0.259	0.086	0.346
16	GEOMETRY and MENSURATION	KNOWLEDGE	0.400	0.320	0.300	0.012	0.185	0.049	0.099	0.235	0.420
17	ALGEBRAIC PROCESSES	APPLICATION	0.300	0.436	0.338	0.000	0.309	0.333	0.099	0.210	0.049
18	NUMBER and NUMERATION	KNOWLEDGE	0.100	0.205	0.248	0.000	0.148	0.383	0.284	0.185	0.000
19	GEOMETRY and MENSURATION	APPLICATION	0.300	0.621	0.491	0.025	0.111	0.395	0.370	0.025	0.074
20	GEOMETRY and MENSURATION	APPLICATION	0.300	0.246	0.206	0.037	0.148	0.086	0.272	0.383	0.074

RELIAB ILITY = 0.680 AVERAGE DIFFICULTY = 0.400

STUDENTS' CAREER ASPIRATION SCALE

APPENDIX C

Reliability Statistics

Cronbach's Alpha	N of Items
.884	13

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
b1 How important is it for you to have a well-paying job later when you graduate from school?	39.03	56.999	.663
b2 How important is it for you to work hard to get ahead?	38.73	60.754	.644

b3 How important is it for you to have a good job later in life if you work very hard about your academic work now?	39.07	57.720	.623
b4 How important is it for you to cope with any barriers to success that you meet in school?	38.87	64.051	.406
b5 How important is it for you to further your education to the higher university?	38.80	65.062	.318
b6 How important is it for you to be inspired by famous people in life?	39.13	61.430	.500
b7 How important is it for you to become a professor in life?	39.17	60.351	.495
b8 How important is it for you to become a researcher?	39.20	56.924	.709
b9 How important is it for you to become an artisan in life?	39.20	60.441	.518
b10 How important is it for you to become a consultant in teaching hospital?	39.03	61.482	.497
b11 How important is it for you to become the head of a tertiary institution?	39.07	57.237	.677
b12 How important is it for you to make your parents proud if you take your education seriously now?	38.90	58.921	.634
b13 How important is it for you to get good job you like when you leave school?	39.00	57.586	.689

Item-Total Statistics

	Cronbach's Alpha if Item Deleted
b1 How important is it for you to have a well-paying job later when you graduate from school?	.871
b2 How important is it for you to work hard to get ahead?	.873
b3 How important is it for you to have a good job later in life if you work very hard about your academic work now?	.873
b4 How important is it for you to cope with any barriers to success that you meet in school?	.883
b5 How important is it for you to further your education to the higher university?	.886
b6 How important is it for you to be inspired by famous people in life?	.879
b7 How important is it for you to become a professor in life?	.880
b8 How important is it for you to become a researcher?	.868

b9 How important is it for you to become an artisan in life?	.878
b10 How important is it for you to become a consultant in teaching hospital?	.879
b11 How important is it for you to become the head of a tertiary institution?	.870
b12 How important is it for you to make your parents proud if you take your education seriously now?	.872
b13 How important is it for you to get good job you like when you leave school?	.869

STUDENTS' MOTIVATION SCALE
APPENDIX D

Reliability Statistics

Cronbach's Alpha	N of Items
.922	15

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
b1 How important is it for you to have a well-paying job later when you graduate from school?	39.03	56.999	.663
b2 How important is it for you to work hard to get ahead?	38.73	60.754	.644
b3 How important is it for you to have a good job later in life if you work very hard about your academic work now?	39.07	57.720	.623

b4 How important is it for you to cope with any barriers to success that you meet in school?	38.87	64.051	.406
b5 How important is it for you to further your education to the higher university?	38.80	65.062	.318
b6 How important is it for you to be inspired by famous people in life?	39.13	61.430	.500
b7 How important is it for you to become a professor in life?	39.17	60.351	.495
b8 How important is it for you to become a researcher?	39.20	56.924	.709
b9 How important is it for you to become an artisan in life?	39.20	60.441	.518
b10 How important is it for you to become a consultant in teaching hospital?	39.03	61.482	.497
b11 How important is it for you to become the head of a tertiary institution?	39.07	57.237	.677
b12 How important is it for you to make your parents proud if you take your education seriously now?	38.90	58.921	.634
b13 How important is it for you to get good job you like when you leave school?	39.00	57.586	.689

Item-Total Statistics

	Cronbach's Alpha if Item Deleted
b1 How important is it for you to have a well-paying job later when you graduate from school?	.871
b2 How important is it for you to work hard to get ahead?	.873
b3 How important is it for you to have a good job later in life if you work very hard about your academic work now?	.873
b4 How important is it for you to cope with any barriers to success that you meet in school?	.883
b5 How important is it for you to further your education to the higher university?	.886
b6 How important is it for you to be inspired by famous people in life?	.879
b7 How important is it for you to become a professor in life?	.880
b8 How important is it for you to become a researcher?	.868
b9 How important is it for you to become an artisan in life?	.878
b10 How important is it for you to become a consultant in teaching hospital?	.879
b11 How important is it for you to become the head of a tertiary institution?	.870

b12 How important is it for you to make your parents proud if you take your education seriously now?	.872
b13 How important is it for you to get good job you like when you leave school?	.869

STUDENTS' MOTIVATION SCALE
APPENDIX D

Reliability Statistics

Cronbach's Alpha	N of Items
.922	15

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
b1 My mathematics teacher uses a variety of teaching methods.	36.10	137.403	.642
b2 Mathematics topics are interesting	36.37	143.068	.508
b3 The topics are exciting.	36.13	138.189	.662
b4 My friends also like math	35.97	149.413	.224
b5 I feel confident about the topics in a math class.	36.27	132.823	.777

b6 I always score high marks in math than other subjects	36.40	136.386	.661
b7 I always win prices anytime I go for math competition.	36.40	137.559	.692
b8 It stimulates my thinking.	36.23	133.013	.791
b9 I am sure that I can understand it.	36.47	141.568	.490
b10 I can do well on math tests no matter how difficult the questions may be	36.27	136.892	.645
b11 My parents want me to become an engineer	36.20	139.131	.553
b12 My friends also like math	36.47	140.326	.567
b13 My father gives me money anytime i do well in math tests.	36.43	134.737	.762
b14 I want my friends to see me as a brilliant boy.	36.17	134.144	.775
b15 My mother promises me anytime I do well in math test.	36.27	132.133	.784

Item-Total Statistics

	Cronbach's Alpha if Item Deleted
b1 My mathematics teacher uses a variety of teaching methods.	.916
b2 Mathematics topics are interesting	.920
b3 The topics are exciting.	.916
b4 My friends also like math	.929
b5 I feel confident about the topics in a math class.	.912
b6 I always score high marks in math than other subjects	.916
b7 I always win prices anytime I go for math competition.	.915

b8 It stimulates my thinking.	.911
b9 I am sure that I can understand it.	.921
b10 I can do well on math tests no matter how difficult the questions may be	.916
b11 My parents want me to become an engineer	.919
b12 My friends also like math	.919
b13 My father gives me money anytime i do well in math tests.	.913
b14 I want my friends to see me as a brilliant boy.	.912
b15 My mother promises me anytime I do well in math test.	.912

STUDENTS' SOCIO-ECONOMIC BACKGROUND QUESTIONNAIRE
APPENDIX E

Reliability Statistics

Cronbach's Alpha	N of Items
.715	11

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted

AVALB Electricity	28.18	21.512	.113	.715
AVALC Generator	28.03	20.462	.319	.702
AVALD Tap water	27.68	21.092	.153	.714
AVALE Television	28.16	21.176	.199	.711
AVALF Air conditioning	27.63	20.772	.240	.708
AVALG CD player	28.16	20.756	.324	.704
AVALH Internet facility	27.62	21.230	.134	.715
AVALI Radio	28.10	20.629	.315	.703
AVALJ Personal bedroom	27.78	20.440	.290	.704
AVALK Flush toilet	28.02	19.798	.482	.690
AVALL Car	27.83	19.860	.423	.693

APPENDIX I

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

INSTITUTE OF EDUCATION

UNIVERSITY OF IBADAN,

IBADAN, NIGERIA.

Mathematics Self-concept Scale (MSCS)

Dear Student,

This questionnaire is designed to find out exactly the way you think, feel, act, value and evaluate yourself in Mathematics. This is for a research purpose and it will highly be appreciated if you respond to each item with utmost sincerity. Kindly give your candid opinion and be assured of utmost confidentiality of the information supplied. Thank you.

Dear Student,

This questionnaire is for a research purpose and it will be highly appreciated if you respond to each item with utmost sincerity. Kindly give your candid opinion and be assured of utmost confidentiality of the information supplied. Thank you.

Section A *(Bio-data)*: Please put a tick (√) in the appropriate boxes and supply other information where necessary.

1. Name of School: _____
2. Location of School *(Town)*:_____
3. Local Government Area: _____
4. Gender: Male [ ] Female [ ]
5. Age *(In* Years as at 1st July, 2016*)*:
6. Class: JSS I [ ]

Please, read each of the following statements and indicate (□) your degree of agreement or disagreement as follows: Very True Of Me (VTOM), True Of Me (TOM), Not True Of Me (NTOM), Not Absolutely True Of Me (NATOM)

S/N	Mathematics Confidence	VTOM 4	TOM 3	NTOM 2	NATOM 1
1.	I can follow the mathematics lessons easily.				
2.	If I really try, I can overcome most of my problems in mathematics class				
3.	Most of my classmates are smarter than I am in mathematics class				
4.	I feel that I am poor in my mathematics work.				
5.	I am able to do better than my friends in mathematics than most subjects.				
6.	I do not give up easily when I am faced with a difficult question in my mathematics work.				
7.	I am capable of making a good grade in Mathematics				
8.	I often feel like quitting mathematics class.				
9	I think I am one of the best students in math				
10	Every question in Mathematics is answerable				

11	I feel delighted when answering Mathematics questions				
12	My present knowledge of Mathematical concepts is high				
13	Mathematics improves my understanding of other subjects				
14	I am interested in the things I learn in Mathematics.				
15	Learning Mathematics gives me meaning to learning activities				

APPENDIX II

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

INSTITUTE OF EDUCATION

UNIVERSITY OF IBADAN,

IBADAN, NIGERIA.

Mathematics Achievement Test (MAT)

Dear Student,

This questionnaire is for a research purpose and it will be highly appreciated if you respond to each item with utmost sincerity. Kindly give your candid opinion and be assured of utmost confidentiality of the information supplied. Thank you.

Section A *(Bio-data)*: Please put a tick (√) in the appropriate boxes and supply other information where necessary.

1. Name of School: _____

2. Location of School *(Town)*:_____

3. Local Government Area: _____

4. Gender: Male [ ] Female [ ]

5. Age *(In* Years as at 1st July, 2016*)*:

6. Class: JSS I [ ]

Section B

Answer all the questions. Use pencil throughout. Work fast and as accurately as you can. If you cannot answer any question, do not spend too much time on it; go on to the next question. Select the best option from *a*—*e* in each item.

Time: 1 hour 30 Minutes

Circle the correct answer for the Questions. Circle the letter only.

1. The value of the 8 in 18 214 is:
A 8 units **B** 8 tens **C** 8 hundreds **D** 8 thousands **E** 8 ten thousands

2. The Roman numerals CXCIV represent the number:
A 194 **B** 196 **C** 214 **D** 215 **E** 216

3. The value of XXXVI is:
A 12 **B** 24 **C** 26 **D** 36 **E** 62

4. Which one of the following is not equivalent to $\frac{1}{2}$?
A $\frac{9}{18}$ **B** $\frac{11}{12}$ **C** $\frac{15}{30}$ **D** $\frac{16}{32}$ **E** $\frac{24}{42}$

5. If $5\frac{1}{7}$ is expressed as an improper fraction, its numerator will be:
A 8 **B** 12 **C** 13 **D** 35 **E** 36

6. To express the fraction $\frac{30}{48}$ in its lowest terms, divide the numerator and denominator by:
A 2 **B** 3 **C** 5 **D** 6 **E** 8

7. 45 minutes, expressed as a fraction of one hour, is:
A $\frac{1}{60}$ **B** $\frac{1}{45}$ **C** $\frac{3}{4}$ **D** $\frac{4}{5}$ **E** $\frac{4}{3}$

8. $\frac{4}{25}$ expressed as a percentage is:
A 4% **B** $6\frac{1}{4}$ % **C** 8% **D** 12% **E** 16%

9. When $x = 8$, the value of $18 - x$ is:
A 1 **B** 8 **C** 10 **D** 18 **E** 26

10. If $13 = a - 9$ is a true sentence, then a =:
A 0 **B** 4 **C** 9 **D** 13 **E** 22

11. Maria is x years old. In two years' time she will be 16 years old. x =:
A 2 **B** 7 **C** 8 **D** 14 **E** 18

12. The number which is 6 less than m is:
A $m - 6$ **B** $6 - m$ **C** $6m$ **D** $\frac{m}{6}$ **E** $m + 6$

13. When $x = 4$, the value of $8x$ is:

A 2 **B** 4 **C** 12 **D** 32 **E** 84

14. Each face of a cuboid is in the shape of a:

A triangle **B** rectangle **C** Square **D** hexagon **E** circle.

15. The value of the 3 in 24.635 is:

A 3 thousandths **B** 3 hundredths **C** 3 tenths **D** 3 units **E** 3 tens

16. The HCF of 24 and 60 is:

A 2 **B** 3 **C** 4 **D** 6 **E** 12

17. The lowest common denominator of $\frac{2}{3}$, $\frac{4}{5}$, $\frac{5}{6}$ and $\frac{3}{10}$ is:

A 15 **B** 30 **C** 50 **D** 60 **E** 900

18. Four pages of a 16-page newspaper are missing. The percentage missing is

A $\frac{1}{4}$% **B** 4% **C** 16% **D** 25% **E** 75%

19. If $x = 3$, the value of $7x - 2x$ is:

A 6 **B** 8 **C** 15 **D** 21 **E** 53

20. $\frac{3}{5}$ of $\frac{5}{3}$ is:

A $\frac{1}{5}$ **B** $\frac{1}{3}$ **C** $\frac{9}{25}$ **D** 1 **E** 2 $\frac{7}{9}$

MARKING GUIDE

1 D 2A 3 D 4 B 5 E 6 D 7 C 8 E 9 C 10 E 11 D

12 A 13 D 14 B 15 B 16 E 17 B 18 D 19 C 20

APPENDIX III

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

INSTITUTE OF EDUCATION

UNIVERSITY OF IBADAN,

IBADAN, NIGERIA.

Students' Motivation Scale (SMS)

Dear Student,

This questionnaire is for a research purpose and it will be highly appreciated if you respond to each item with utmost sincerity. Kindly give your candid opinion and be assured of utmost confidentiality of the information supplied. Thank you.

Section A *(Bio-data)*: Please put a tick (√) in the appropriate boxes and supply other information where necessary.

1. Name of School: _____

2. Location of School *(Town)*:_____

3. Local Government Area: _____

4. Gender: Male [ ] Female [ ]

5. Age *(In* Years as at 1st July, 2016*)*:

6. Class: JSS I [ ]

SECTION B

Please indicate the extent to which each statement is true of you. Please choose one box on each line.

S/N	ITEMS	VTOM 4	TOM 3	NTOM 2	ANTOM 1
	I wish to learn mathematics because :				
1	My mathematics teacher uses a variety of teaching methods.				
2	Mathematics topics are interesting				
3	The topics are exciting.				
4	My friends also like math				
5	I feel confident about the topics in a math class.				
6	I always score high marks in math than other subjects				
7	I always win prices anytime I go for math competition.				
8	It stimulates my thinking.				
9	I am sure that I can understand it.				
10	I can do well on math tests no matter how difficult the questions may be				
11	My parents want me to become an engineer				
12	My friends also like math				
13	My father gives me money anytime i do well in math tests.				

14	I want my friends to see me as a brilliant boy.				
15	My mother promises me anytime I do well in math test.				

APPENDIX IV

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

INSTITUTE OF EDUCATION

UNIVERSITY OF IBADAN,

IBADAN, NIGERIA.

Parental Socio-Economic Background Questionnaire (PSEBQ)

Dear Student,

The aim of this questionnaire is to obtain information on the socio-economic status of your parents. This questionnaire is designed for a research purpose and it will be highly appreciated if you respond to each item with utmost sincerity. Kindly give your candid opinion and be assured of utmost confidentiality of the information supplied. Thank you.

Section A *(Bio-data)*: Please put a tick (√) in the appropriate boxes and supply other information where necessary.

1. Name of School: _____
2. Location of School *(Town)*:_____
3. Local Government Area: _____
4. Gender: Male [ ] Female [ ]
5. Age *(In* Years as at 1st July, 2016*)*:
6. Class: JSS I [ ]

Section B; Instruction: Please respond to the items below by ticking (√) as appropriate in the space provided.

Qualification of Parents

1. My father's highest qualification is:
   - (a) SSCE ☐
   - (b) NCE ☐
   - (c) OND ☐
   - (d) HND ☐
   - (e) First degree ☐
   - (f) Masters ☐
   - (g) PhD ☐
2. My mother's highest qualification is:
   - (a) SSCE ☐
   - (b) NCE ☐
   - (c) OND ☐
   - (d) HND ☐
   - (e) First degree ☐
   - (f) Masters ☐
   - (g) PhD ☐
3. My father's occupation is:
   - i .Medicine and Surgery ☐
   - iii Law/banking ☐
   - iv Civil servant/teaching at Primary/secondary ☐
   - v Artisans/ Peasant Farming/ Petty Trading ☐
   - vi Unemployed ☐
4. My mother's occupation is:

i .Medicine and Surgery ☐

ii Teaching at University/Polytechnic/College of Education ☐

iii Law/banking ☐

iv Civil servant/teaching at Primary/secondary ☐

v Artisans/Farming ☐

vi Petty Trading ☐

vii Unemployed ☐

Section C: Answer this section with either yes or no or by ticking (√) the appropriate one:

Studentschooling

5 What type of primary school did you attend?

Public school (Government owned) ☐

Private school ☐

6. How do you come to school in the morning?

i. You come in your parents' private car ☐

ii. You come in public vehicles ☐

ii. You come with bike ☐

iv. You trek to school ☐

7. Do you have your own personal mathematics textbook? Yes ☐ No ☐

8. When you are asked to pay any fee in school do you pay at once? Yes ☐ No ☐

9. Do you have mathematics lesson teacher at home? Yes ☐ No ☐

Section D: Answer this section with either yes or no or by ticking (√) the appropriate one:

Housing Condition

10. Is the house you are living owned by your parents? Yes ☐ No ☐

11. Is the house: fenced ☐ not fenced ☐

12. Is the floor of the house: Tilled Rugged ☐ Carpeted ☐ Bare floor ☐

13. Is the toilet in your house: Water closet ☐ Pit latrine ☐ Shot put ☐

14. What is the source of water in your house? ☐

i. Bore hole water inside your compound ☐

ii. Well water inside your compound ☐

iii. Buy water outside your compound? ☐

iv. Fetch water from your neighbour's compound free? ☐

Section E: Answer this section with either yes or no:

15. Availability of each of these facilities in my house YES ☐ NO ☐

i. Computer ☐

ii. Electricity ☐

ii. Generator ☐

iv. Tap water ☐

v Television ☐

vi. Air conditioning ☐

vii CD player ☐

viii. Internet facility ☐

ix. Radio ☐

x. Personal bedroom ☐

xi. Flush toilet ☐

xii. Car ☐

APPENDIX V

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

INSTITUTE OF EDUCATION

UNIVERSITY OF IBADAN,

IBADAN, NIGERIA.

Students' Career Aspiration Scale (SCAS)

Dear Student,

This questionnaire is designed for a research purpose and it will be highly appreciated if you respond to each item with utmost sincerity. Kindly give your candid opinion and be assured of utmost confidentiality of the information supplied. Thank you.

Dear Student,

This questionnaire is for a research purpose and it will be highly appreciated if you respond to each item with utmost sincerity. Kindly give your candid opinion and be assured of utmost confidentiality of the information supplied. Thank you.

Section A *(Bio-data)*: Please put a tick (√) in the appropriate boxes and supply other information where necessary.

1. Name of School: _____

2. Location of School *(Town)*:_____

3. Local Government Area: _____

4. Gender: Male [ ] Female [ ]

5. Age *(In* Years as at 1st July, 2016*)*:

6. Class: JSS I [ ]

SECTION B

Please indicate the level of your motivation toward mathematics in the following. Choose one box on each line.

S/NA	ITEMS	Very Important (VI) 3	Important (I) 2	Not Very Important (NVI) 1
1	How important is it for you to have a well-paying job later when you graduate from school?			
2	How important is it for you to work hard to get ahead?			
3	How important is it for you to have a good job later in life if you work very hard about your academic work now?			
4	How important is it for you to cope with any barriers to success that you meet in school?			
5	How important is it for you to further your education to the higher university?			
6	How important is it for you to be inspired by famous people in life?			
7	How important is it for you to become a professor in life?			
8	How important is it for you to become a researcher?			
9	How important is it for you to become an artisan in life?			
10	How important is it for you to become a consultant in teaching hospital?			
11	How important is it for you to become the head of a tertiary institution?			

12	How important is it for you to make your parents proud if you take your education seriously now?			
13	How important is it for you to get good job you like when you leave school?			

APPENDIX VI

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

INSTITUTE OF EDUCATION

UNIVERSITY OF IBADAN,

IBADAN, NIGERIA.

Selection Of Students Associated with Big-Fish-Little-Pond Using Deviation From Common Entrance Results

S/N	Name Of Students	Exam Number	1ST MSC %	2ND MSC %	MAT %	Average	Common Entrance Record	Deviation Of -5 and less
A	**ABADINA COLLEGE**							
1.	1	020020031934003	44	41	8	60.56	81	-20.44
2.	2	140550031633022	46	45	2	53.89	78	-24.11

3.	3	141190161630707	43	44	3	53.33	77	-23.67
4.	4	02121026	36	42	9	58.33	85	-26.67
5.	5	14056029	44	49	1	53.33	83	-29.67
6.	6	140830161873738	52	52	1	59.44	79	-19.56
7.	7	06038006167038	36	44	6	54.44	78	-23.56
8.	8	141710021635926	40	38	4	50.00	78	-28.00
9.	9	020020031912640	44	36	5	52.78	84	-31.22
10.	10	02003007160043	36	40	5	50.56	82	-31.44
11.	11	020020031634005	44	49	8	65.00	83	-18.00
12.	12	020020031619083	49	43	6	61.11	84	-22.89
B		**EMMANUEL COLLEGE**						
13.	1	08180091861709	50	39	8	62.78	74	-11.22
14.	2	140550031630978	43	53	4	60.00	70	-10.00
15.	3	060380061617024	42	38	4	51.11	72	-20.89
16.	4	021360131914735	41	46	3	53.33	68	-14.67
17.	5	140830161873695	41	52	9	66.67	76	-9.33
18.	6	060080081891749	51	54	5	66.67	70	-9.33
19.	7	020440101649104	46	54	6	65.56	77	-11.44
20.	8	060290020194544	57	25	4	52.22	67	-14.78
21	9	080190051868792	36	38	4	47.78	72	-24.22
22.	10	080440021862186	43	41	5	55.00	74	-19.00
23.	11	020940021632548	42	38	5	52.78	76	-22.22
24.	12	020420101912497	47	56	8	70.56	82	-11.44
C		**ST BRIGID'S, MOKOLA**						
25.	1	061080086271804	48	45	4	58.33	64	-5.67
26.	2	062160170196893	37	48	7	58.89	70	-11.11
27.	3	080110041677794	29	41	3	43.89	49	-5.11
28.	4	080320061861767	40	48	2	52.22	58	-5.78
29.	5	080040041627086	44	51	4	59.44	79	-19.56
30.	6	080310011861025	43	45	4	55.56	65	-9.44
31.	7	081080101626499	46	54	6	65.56	77	-11.44
32.	8	062030181674029	44	41	3	52.22	60	-7.78
D		**OLUYOLE ESTATE GRAMMAR, RING-ROAD**						

33.	1	141290101633703	45	45	9	65.00	83	-18.00
34.	2	141010141915304	41	47	4	55.56	77	-21.44
35.	3	141010141915505	51	50	4	62.78	70	-7.22
36.	4	141010141915506	47	50	6	63.89	77	-13.11
37.	5	069910130196655	53	40	6	61.67	82	-20.33
38.	6	141180101630151	45	51	11	71.67	82	-10.33
39.	7	141290101633746	46	50	6	63.33	75	-11.67
40.	8	140040071916145	51	47	3	59.44	81	-21.56
E		**ANSARDEEN COLLEGE, LIBERTY**						
41.	1	100520201875511	51	46	4	60.56	68	-7.44
42.	2	251230011625004	39	49	6	58.89	64	-5.11
43.	3	100410181875006	36	44	7	56.11	65	-8.89
44.	4	092110121676261	43	34	1	44.44	50	-5.56
45.	5	090390101869672	44	40	7	58.33	66	-7.67
46.	6	091410131611595	43	45	4	55.56	62	-6.44
47.	7	10017012876065	40	41	6	55.00	65	-10.00
48.	8	100340051879910	46	45	6	60.56	67	-6.44
49.	9	100560201875628	44	44	8	62.22	81	-18.78
F		**BAPTIST SECONDARY SCHOOL, OKE ADO**						
50.	1	102031201609027	42	49	8	63.89	86	-22.11
51.	2	101140061609493	52	36	3	53.89	80	-26.11
52.	3	100560201609898	49	46	3	57.78	79	-21.22
53.	4	1005602016098889	40	44	5	55.00	84	-29.00
54.	5	10056020160982	50	37	4	55.00	75	-20.00
55.	6	101346824561405	46	50	4	60.00	72	-12.00
56.	7	1005002018757002	50	51	7	67.78	78	-10.22
57.	8	100560201875626	51	48	9	70.00	81	-11.00
58.	9	100490141878345	50	44	6	62.22	72	-9.78
59.	10	100560201875626	41	42	7	57.78	81	-23.22
60.	11	090370131869618	54	44	5	62.78	84	-21.22
61.	12	100950181677550	52	49	4	62.78	84	-21.22
G		**ST ANNES JUNIOR, MOLETE**						

62	1	096320819068716	51	47	13	76.11	82	-5.89
63.	2	094589102314451	39	52	16	77.22	82	-5.00
64.	3	092361089108890	43	43	16	74.44	82	-7.56
65.	4	060038971719700	44	40	9	61.67	72	-10.33
66.	5	140236890111823	44	47	11	68.89	77	-8.11
67.	6	09963570162001	47	45	14	74.44	82	-7.56
68.	7	080634041616390	55	38	9	66.67	72	-5.33
69.	8	096889165444780	53	36	10	66.11	77	-10.89
70.	9	098864321022334	39	41	11	62.78	68	-5.22
H		**IBADAN CITY ACADEMY, ELETA**						
71.	1	251740231886732	41	45	5	56.11	83	-26.89
72.	2	250270071625539	46	36	6	55.56	83	-27.44
73.	3	091060131871645	47	23	8	52.22	79	-26.78
74.	4	250110181625357	47	39	1	49.44	84	-34.56
75.	5	252170211898968	47	50	3	58.89	87	-28.11
76.	6	090150021871083	46	35	7	56.67	83	-26.33
77.	7	090330021871278	46	32	1	45.00	76	-31.00
78.	8	250300621189541	50	37	3	53.33	77	-23.67
79.	9	091710101867029	44	32	3	47.22	73	-25.78
80.	10	250110181899937	51	39	2	53.33	84	-30.67
81.	11	250290111881495	46	36	2	48.89	80	-31.11
82.	12	080160021871108	40	35	3	46.67	82	-35.33
I		**IBADAN GRAMMAR SCHOOL, OKE ADO**						
83.	1	250280231895653	52	47	6	65.00	89	-24.00
84.	2	09045065	46	39	4	53.89	74	-20.11
85.	3	020410021913586	49	49	11	72.78	83	-10.22
86.	4	250280231895636	54	47	11	74.44	92	-17.56
87.	5	100560201609877	49	45	7	63.89	87	-23.11
88.	6	250280231895648	49	41	7	61.67	82	-20.33
89.	7	09037081	50	43	8	65.00	83	-18.00
90.	8	09010617	47	44	3	55.56	79	-23.44
91.	9	09182015	45	43	8	62.22	83	-20.78
92.	10	09036	48	41	5	57.78	87	-29.22

93.	11	090370131869610	49	48	1	55.56	84	-28.44
94.	12	09037077	46	41	2	51.67	87	-35.33
J		**ALAFFIN SENIOR SECONDARY, OYO**						
95.	1	030650011643724	42	35	8	56.11	65	-8.89
96.	2	030900060190059	48	47	9	67.78	89	-21.22
97.	3	030540071920046	48	52	7	67.22	77	-9.78
98.	4	020530081912560	51	53	4	64.44	73	-8.56
99.	5	030460031641631	42	40	10	62.22	69	-6.78
100	6	030240081641582	43	40	4	52.78	60	-7.22
101	7	299590021636980	51	50	5	64.44	75	-10.56
102	8	030650011643795	55	51	5	67.22	83	-15.78
103	9	030900060190055	48	36	11	65.00	70	-5.00
K		**ORANYAN GRAMMAR SCHOOL, OYO**						
104	1	030578943569911	42	48	3	55.00	76	-21.00
105	2	030840061641815	44	50	5	60.56	69	-8.44
106	3	300480081636308	50	50	2	58.89	74	-15.11
107	4	300740081634581	54	47	2	59.44	78	-18.56
108	5	280690020195197	49	45	4	58.89	64	-5.11
109	6	030570081651412	50	42	2	54.44	71	-16.56
110	7	300020050191648	39	48	5	56.67	72	-15.33
111	8	030220050191648	51	49	4	62.22	75	-12.78
112	9	030460031641683	54	46	6	65.56	75	-9.44
113	10	030234362334311	55	48	8	70.56	80	-9.44
114	11	030730041643916	42	36	8	56.67	64	-7.33
L		**ISALE OYO COMMUNITY GRAMMAR**						
115	1	03060041646018	47	50	5	62.22	69	-6.78
116	2	030730041643970	47	49	5	61.67	74	-12.33
117	3	030730041643914	43	45	6	58.89	70	-11.11
118	4	03060041646032	47	52	5	63.33	69	-5.67
119	5	030730041643977	46	50	6	63.33	70	-6.67
120	6	030730041643924	42	46	3	53.89	63	-9.11

121	7	030456731129128	44	50	6	62.22	69	-6.78
122	8	030730041643988	50	52	3	61.67	70	-8.33
123	9	030730041643991	41	53	9	67.22	72	-5.00
124	10	030231541123981	49	44	3	56.67	65	-8.33
125	11	030730041643998	39	46	2	50.56	65	-14.44
126	12	030048691152997	54	51	1	60.00	70	-10.00

APPENDIX VII

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

INSTITUTE OF EDUCATION

UNIVERSITY OF IBADAN,

IBADAN, NIGERIA.

COUNSELLORS' THERAPEUTIC TRAINING PACKAGE

Experimental Group 1 (Cognitive Behavioural Group Therapy)

Step 1: Relationship Building: The primary stage includes form a rapport as well as emphases on attracting participants to discover matter that rightly have emotional impact them. The first meeting is significant since the participant is interpreting the oral as well as silent communications plus sort conclusion about the psychotherapist as well as the psychotherapy state. Is the psychotherapist talented to understand the participant? Does the participant assessment about the psychotherapist is sincere?

A few steps for Relationship Building for the Counsellor

- Make yourself known to the members
- Ask participant to take a seat
- Make sure participant is relaxed
- Address the participant by name
- Invite social discussion to diminish uneasiness
- Lookout for nonverbal behaviour as indications of participant's enthusiastic state
- Ask participant to depict his or her purpose behind coming to talk
- Permit participant time to react
- Specify that you are keen on the person individual

Step 2: INTERVENTION: There are dissimilar facts of opinion about what a decent psychotherapist must fix with participants based on the theoretic situations that the therapist pledges to. For instance, the individual-skip proposes that the psychotherapist gets connected rather than interferes by retaining importance on the association. The social method tries to make something start.

THERAPEUTIC TREATMENT PACKAGE

Experimental Group 1 (Cognitive Behavioural Group Therapy)

Instructional Guide for Cognitive Behavioural Group Therapy Intervention

Session 1

Topic: Over-all Outline plus Management of Tool to acquire **Pre-test scores**

Objectives:

The reason for this period of meeting is to give out Mathematics Self-Concept (MSC), Mathematics Achievement Test (MAT), Student Motivation Scale (SMS), Parental Socio-Economic Background Questionnaire (PSEBQ) and Student Career Aspiration Scale (SCAS) to all the participants.

Step 1: The research assistance will introduce him/herself, and let them know that the motivation behind the research is to discover the impact of cognitive behavioural therapy in mathematics self-concept and achievement in junior secondary schools in Oyo State

Step 2: Self-concept was explained to the students

Self-concept is a multidimensional construct that alludes to a man's insight of personality as far as both academic as well as non-academic viewpoints. Academic self-concept alludes to a man's "view of self as for accomplishment in school" Whereas, a man's mathematical self-concept alludes to the observation or faith in his or her capacity to prepare well in mathematics or self-assurance in acquiring knowledge in mathematics. A man's confidence in his or her capacity to do well in mathematics and science has an incentive

concerning a man's ability to partake in quantitative circumstances and is perceived as a critical segment of mathematical and scientific literacy.

Step 3: The goal of the meeting was explained to the students

The goal of this study is to enable you to think, focus and act in a way that can help you improve on your poor performance in mathematics. Cognitive Behavioural therapy help face any challenges you might have in the mathematics class. You will be taught about the causes, effects, low mathematics self-concept and how to deal with these challenges if you participate in the training.

For you to achieve these objectives, you and I have some roles to play. My role is to come here every week to guide and counsel you to achieve these goals and your role is to attend all the sessions with open mind, participate actively, and do all the assignment given to you. These assignments will enable you build your mathematics abilities and improve on your self-concept.

Step 4: The counsellors told the students the duration and procedure of the counselling

The participants will be informed that the counselling will be done once in a week at the duration of 30 minutes per session which will last for nine weeks. The pre-test will be administered to the students. The participants will be given a take home assignment.

Step 5: Closing remarks

The members will be praised for their collaboration, they will be urged to get their work done and they will likewise be reminded when and where to meet for the following session

Session 2

Topic: Thoughts *(*how our thought affect our mood) in cognitive behavioural therapy

Objectives: At the conclusion of the session, the members ought to have the capacity to know:

- The significance of depression
- How participants experience depression
- Understand how their thoughts will influence their mood

Step 1: The participants was received warmly

Step 2: The researcher will review the assignment with the participants and give precise responses to all of them.

Step 3: The researcher introduced the therapy to the participants and give the name of the therapy as. "Cognitive-Behavioural Therapy"

- "Cognitive" alludes to our contemplations.

- "Behavioural" alludes to our activities.
- Depression has most to do with our sentiments.

Step 4: Researcher will educate the participants about depression and how it can affect learning activities in school by showing them diverse approaches to better control how they feel by

1. Diminish or take out sentiments of misery
2. Abbreviate the time they feel discouraged
3. Learn approaches to counteract or abstain from getting discouraged.
4. Feel more responsible for their life by having focus and determination through their academic activities

Step 5: Assignment

1. What sorts of feelings undergo in your thoughts as soon as you feel discouraged or tragic?
2. What do you do when you feel discouraged?
3. How do you coexist with others in the school when you are discouraged?

Step 6: Closing remarks

The participants will be commended for their cooperation, they will be encouraged to do their homework and they will also be reminded when and where to meet for the next session.

Session 3

Topic: Explain the purpose of Cognitive Behavioural Therapy treatment on how it will provide skills to manage thought and behaviour.

Review– The researcher summarise quickly the ideas talked about in Session 2 (to advance adolescent commitment in the programme):

- Sadness
- Cognitive Behavioural therapy for unhappiness

Objective: At the end of the session, members ought to have the capacity to know:

- The importance of thoughts
- How thought will affect their behaviour
- How behaviour will affect how they feel about their school subjects

Step 1: The participants will be received warmly

Step 2: The researcher will review the assignment with the participants and provide accurate answers for all them

Step 3: Researcher will explain thought and feeling to the participants

What are thoughts?

Opinions are notions (expressions or verdicts) that we let ourselves know. We are continually conversing with ourselves inside, however regularly we're not generally mindful of it. It is useful to consider opinions as "substances" (thoughts) that really affect our bodies and brains. Distinctive sorts of thoughts deliver diverse consequences for your state of mind. A few thoughts increment side effects of discouragement, while others enable you to rest easy.

Negative opinion are all opinion that make you feel awful, for example: “I am at all times going to feel unhappy” or “I am ineffective.” .optimistic opinion make you feel healthier, for instance: “I can do things to feel better.” “I am getting better each day.”

Step 4:

Counsellor talked to the students on positive thinking and also ask them to write it down:

1. I know how to do it well again.
2. What a stunning morning.
3. I will be taught how to be contented.
4. Life is attractive.
5. I merit to be given recognition.
6. Despite the fact that things are terrible now, they’ll get improved.
7. I do a high-quality work.
8. I actually feel excellent.
9. This is amusing.
10. I decide the most excellent answer to a hard difficulty.
11. I’m a excellent human being.
12. I’m confident concerning my expectations.
13. I have high-quality control of myself.
14. I have a right to be contented.
15. This is exciting.
16. I actually handle this circumstances fine.
17. I fond of reading.
18. I get along well with others.

19. I have labour hard, now I want to relax.
20. I am thoughtful toward others.
21. I have sufficient time to do the things I desire to perform.
22. I like individuals.
23. I constantly find the power to resolve any complex difficulty.
24. I am a high-quality individual.
25. I am truthful.

Step 5: Assignment

As a take home assignment, participants was asked to write out what they understand by positive thinking.

Step 6: Closing remarks

The participants was commended for their cooperation, they were encouraged to do their homework and they were also reminded when and where to meet for the next session.

Session 4:

Topic: Encourage the Adolescent to Increase Thoughts That Improve Their Mood Towards The Learning of Mathematics

Objective: At the end of the session, participants should be able to know:

- How to increase thoughts that improve their mood toward their learning activities
- How to increase the number of positive thoughts in their mind

Activities

Step 1: The participants will be welcomed warmly

Step 2: The researcher reviewed the assignment with the participants and provided accurate answers for all them.

Step 3: The researcher counselled the participants on how to improve and increase their positive thinking by;

- The participants were taught the topic for the day.
- **Step 4: Assignment**
  As a take home assignment, participants will be asked to write out what they will like to become in the nearest future.

Step 5: Closing remarks

The participants were commended for their cooperation, they were encouraged to do their homework and they were also reminded when and where to meet for the next session

Session 5

Topic: Discuss how students can decrease thoughts that make them feel bad, and how they can laugh it off.

Objective: At the conclusion of the session, the participants should be able to know:

- How to decrease thought that make them feel bad about their school work
- How to laugh at their problems by exaggerating them

Step 1: Researcher will educate them by first discover the contemplation. After that, inform yourself: “This contemplation is tarnishing my disposition, so I am going to adjust it or replace it for a constructive one. Put aside "occasion to be anxious" every day so so as to focus totally on essential feelings and go away with the rest of the day without charge of fears. Express amusement at your trouble by make a mountain out of a molehill of them. If you have a high-quality intellect of humour, endeavour to express amusement at your fears. If you sense you do not have a high-quality sense of humour, attempt to do it any manner you know how to do it. From time to time this can take away the hurt of certain suffering. Frequently a number of the worries we have concerning what might occur make us suffer miserable and they can make us unable to function.

Step 2: Assignment

As a take home assignment, participants will be asked to write about any worry/worries they are having at the moment ad practice how they can laugh it laugh so that they can so that they can have focus on their learning activities

Step 3: Closing remarks

The participants will be commended for their cooperation, they will be encouraged to do their homework and they will also be reminded when and where to meet for the next session.

Session 6

Topic: Educate participants about future goals and how to achieve them

Objective: At the end of the session, the participants should be able to:

- Define goals
- Mention different types of goals they know
- Identify their own future goals and how they will achieve them
- Know how reaching their goals will help them feel better

Step 1: The participants will be welcomed warmly

Step 2: The researcher will review the assignment with the participants and provide accurate answers for all them

Step 3: The researcher will educate the participants on goals and how they will work towards their own future goals: What Are Goals? How can reaching goals help the participants feel better?

There are several types of goals:

Short term goals: Things you'd like to do soon (say in the next 6 months)

Long term goals: Things you'd like to do at a number of point in your existence

life objective: Your life beliefs. What do you worry most concerning in existence?

Recognize objective – what are your objectives?

Setting understandable, real objectives: It is frequently hard to decide earlier what is sensible and what is not. What is not sensible now can be sensible in the upcoming year. Though, if you discover you can not meet up the majority of your objectives at the present, then they are most likely not sensible for you at this period.

To make adjustment in our lives, at times we require to create amend in our objectives:

- Things that are sensible may turn out to be impractical.
- For instance: A teenager plays volleyball and she had liked to play in a main league. She injured her knee roughly at some stage in a game, and she cannot stay playing that sport. Though, perhaps she can turn out to be a volleyball trainer or helper coach.
- Things that were impractical might turn out to be practical.

To help overcome depression: Lay down understandable, real objectives so that you can be certain of at what time you have arrive at them.

Step 4: Assignment

As a take home assignment, after discussing this session, , participants will be asked to Discover likely barrier to attain his/her objectives.

Step 5: Closing remarks

The participants will be commended for their cooperation, they were encouraged to do their homework and they were also reminded when and where to meet for the next session.

Session 7

Topic: Educate participants how Cognitive behavioural therapy will let them see the reality of the world and how they can face it to achieve their goals.

Objective: At the end of the session, participants should be able to:

- See the difference between the two worlds

- How they can relate the real world to their learning activities and feel great in achieving their future goals

Step 1: The participants will be welcomed warmly

Step 2: The researcher will review the assignment with the participants and provide accurate answers for all them

Step 3: The researcher will educate the participants about the reality of life through their thinking, behaviour and their feelings they have towards school subjects which are the key worlds in cognitive behavioural therapy:

1. We live in two worlds: The objective world (the world outside, everything outside of us)

For example, the places, people and events around us that we can't change (where we live, the school we go to, who are parents are).

The subjective (internal) world (our internal world, what's inside our minds) for example, our thoughts, beliefs, wishes, feelings and dreams (how we perceive what we do and what happens to us). These two worlds are our reality. The key to feeling psychologically fit is to study in what way or manner to run these two parts of our realism.

- The objective earth, in general, we cannot modify, but we can learn ways to deal with it in a manner that it does not have an effect on how we feel so much. For instance, you cannot modify the detail that your age group are attaining higher grades than you do, however you can adjust the manner you respond to it.

No individual totally controls these two worlds. Though, you can be taught how to have additional control over your personal earth and recognize habits to run the objective earth.

- As soon as individuals are miserable they feel that they have no control, that there is nothing they can do to feel improved. Though, things can constantly transform and get better.

There are ways to feel you have extra control and feel less miserable.

Alternative

- From time to time, we discover ourselves in situation in which it's hard to make choice since we do not see options or we merely observe one. It can as well occur that we feel we don't have any option when things don't occur the means we want them to. On these circumstances it aid to regard as all the options and not to centre on that piece of information that you don't have what you actually required.
- The more options you have, the more liberty you'll have.
- Making your two worlds better for you.

Making your outside world better.

What things in your outside world are causal to your sadness?

What can you do about them now?

Making your inside or internal world improved. What things in your internal world are causal to your hopelessness?

When your time becomes more acceptable, your life will too and you will feel improved. Put together enjoyable performance into your life plan. If enjoyable performance assist you conquer your sadness, they can as well assist you feel better psychologically. The better you feel, the more you can assist yourself and others.

Step 4: Assignment

As a take home assignment, ask the participants if they think their objectives are sensible? Assess with the teenager whether he/she can arrive at his/her objective taking into deliberation his/her: skill, possessions, inspiration, etc.

Step 5: Closing remarks

The participants will be applauded for their collaboration, they will be confident to do their homework and they will as well be reminded when and where to meet for the next session.

Session 8

Topic: Overall Review, Post-Experiment Test Administration Conclusion

Objectives: At the end of the session, the participants ought to be talented to:

- Summarise their knowledge base on what they have advantage from a variety of ability they have study since the beginning of the agenda.
- Respond to the post-test administration

Step 1: The participants will be welcomed warmly

Step 2: The researcher will review the assignment with the participants and provide accurate answers for all them

Step 3: This will be an synergistic session among the researcher and the participants to determine the result of the therapeutic programme.

Step 4: Activities of the preceding sessions will be role played to see the effectiveness of the treatment.

Step 5: The participants will be given the post-test instruments.

Step 6: The researcher will appreciate the participants for their cooperation, the little gift package for them will be distributed to them.

APPENDIX VIII

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

INSTITUTE OF EDUCATION

UNIVERSITY OF IBADAN,

IBADAN, NIGERIA.

COUNSELLORS' THERAPEUTIC TRAINING PACKAGE

Experimental Group II: **Solution Focused Brief Therapy Intervention**

Stage 1: Connection structure: The first step engages developing a relationship and centre on engaging participants to discover matter that openly influence them. The first consultation is significant for the reason that the participants interpretation the oral and nonverbal messages and create inferences about the counsellor and the psychotherapy state of affairs. Is the

counsellor able to identify with the participant? Does the participant see the therapist as authentic?

A couple of ventures for Relationship Building for the Counsellor

- Make yourself known to the members
- Ask participant to sit down
- Make beyond any doubt participant is comfortable
- Address the participant by name
- Invite social discourse to reduce uneasiness
- Lookout for nonverbal direct as signs of participant's excited state
- Ask participant to portray his or her motivation behind coming to talk
- Permit participant time to respond
- Specify that you are keen on the person

Stage 2: INTERVENTION: There are particular points of view concerning what a respecTable guide should do with participants depending upon the theoretical positions that the advocate purchases in to. For example, the individual-cantered approach suggests that the therapist gets included instead of intervenes by setting emphasis on the relationship.

THERAPEUTIC TREATMENT PACKAGE

Experimental Group II: **Solution Focused Brief Therapy Intervention**

Session 1

Topic: Over-all Outline plus Administration of Instrument to acquire Pre-test scores

Objectives:

The explanation behind this session is to direct Mathematics Self-Concept (MSC), Mathematics Achievement Test (MAT), Student Motivation Scale (SMS), Parental Socio-Economic Background Questionnaire (PSEBQ) and Student Career Aspiration Scale (SCAS) will be administered to every one of the members.

Step 1: The research assistance will present him/herself, and let the parcipants realize that the inspiration after the investigation is to discover the influence of solution focused brief therapy on mathematics self-concept and achievement in junior secondary schools in Oyo State. Self-concept is a lateral form that insinuates a man's impression of self to the extent both academic and non-academic viewpoints.

Step 2: Counsellor explained Academic self-concept to the students

Academic self-concept implies a man's "impression of personality regarding success in school" Whereas, a man's mathematical self-concept suggests the insight or confidence in his or her aptitude to prepare higher in mathematics or trust in knowledge of mathematics. A man's trust in his or her skill to prepare higher in mathematics as well as science has a motivator as for a man's capacity to take an interest in quantitative conditions and is seen as a basic portion of numerical and logical education.

Step 3: Counsellor told the students the purpose of the meeting

The objectives of this study is to assist you to reason, focus and act in a way that can help to enhance you from poor performance in mathematics.

Step 4: Counsellor told the students the advantage of Solution focused brief therapy

Solution focused brief therapy will be helpful to you to face any challenges you might be facing in your mathematics class. You will be taught about the causes, effects, low mathematics self-concept and how to deal with these challenges if you participate in the training.

Step 5: Counsellor told the students what they will do to make the meeting effective

For you to achieve these objectives, you and I have some roles to play. My role is to come here every week to guide and counsel you to achieve these goals and your role is to attend all the sessions with open mind, participate actively, and do all the assignment given to you. These assignments will enable you build your mathematics abilities and improve on your self-concept.

The participants will be informed that the counselling will be once in a week at the duration of 30 minutes per session for eight weeks. The pre-test will be administered to the students. The participants will be given a take home assignment

Step 6: Closing remarks

The participants will be commended for their cooperation, they will be encouraged to do their homework and they will also be reminded when and where to meet for the next session

Session 2

Topic: Identification of psychological and emotional responsiveness in individual participant on self-concept in relation to low Performance in mathematics.

Objectives: At the end of the session, the members ought to have the capacity to:

1. Know the importance of Solution Focused Brief Therapy
2. Identify the diverse therapeutic techniques and characteristics of Solution Focused Brief Therapy
3. Importance of Solution Focused Brief Therapy on mathematics self-concept

Step 1: The participants will be welcomed warmly

Step 2: The researcher will review the assignment with the participants and provide accurate answers for all them

Step 3: The researcher will explain Solution Focused Brief Therapy as follows:

What is Solution Focused Brief Therapy (SFBT)? As the name recommends, it is tied in with being brief and concentrating on way out, instead of on issues. Solution-focused brief therapy (SFBT) is a qualities powerful-based interference that is established in the certainty that it is imperative to expand on the assets as well as motivation of members since they recognise their issues the very well in addition they are equipped for producing answers for take care of their own issues.

Solution-focused brief therapy is a way to deal with psychotherapy in light of solution-building rather than investigative. It proceeds a main exit from the difficult-absorbed location in analysis instigated by Freud as well as continued by the greatest arenas of therapy. The most profound underlying foundations of SFBT can be drew back to Gregory Bateson, Milton Ericksson and Ludwig Wittgenstein (2007). "It investigates current assets and future expectations as opposed to exhibit issues and past causes" (Iveson, 2002). SFBT claims that all members take possessions as well as one of the therapist's undertakings is to assist the member to find them. Allowing the member to find his own possessions is a somewhat problematic job from the time when leadership need to be complete through delicacy by requesting clever inquiries.

Solution Focused Brief Therapy core techniques

- Miracle Question
- Exceptions
- Coping Questions
- Scaling Question
- Task Development Questions
- Compliments

    (A)Normalising Statements

    (B)Restructuring Statements

    (C)Affirmations

    (D)Bridging Statement

    (E)Between-Session Suggestions

- Problem Free Talk
- Resources
- Goal Setting And Subsequent Therapy
- Evaluate Each Session

Step 4: Assignment

As a take home assignment, members will be requested to work out what they comprehend by the term Solution-focused brief therapy and its characteristics.

Step 5: Closing remarks

The participants will be complimented for their participation, they will be urged to get their work done and they will likewise be reminded when and where to meet for the following session

Session 3

Topic: Identification of unrealistic situation that lead to poor mathematics Performance

Objectives: Objectives: At the end of the session, the members ought to have the capacity to:

1. Explain unrealistic situation
2. Identify unrealistic situation that lead to poor mathematics Performance
3. List examples of the unrealistic situation
4. Know how to be in charge of unrealistic situations mentioned instead of allowing it to influence their mathematics self-concept and achievement

Step 1: The participants will be welcomed warmly

Step 2: The researcher will review the assignment with the participants and provide accurate answers for all them

Step 3: The researcher will ask the participants to explain unrealistic situation, the researcher will then explain unrealistic situation to them and allow them to ask questions.

Unrealistic situation is a situation that influences students' concentration during learning process which also affect their performances in their studies. Students who suffer from unrealistic situation often feel nothing good can come their ways. They believe that they can never pass mathematics. Many factors can cause this unrealistic situation in the life of students. Such factors are:

Effect of Parents' profession

Parents' job effects the student's attainment in school works owing to positions of their investments in their careers that control their position of purchasing capability. Student's academic attainment is harmfully connected with the low position of Parents' socio-economic rank (SES) since it delays the person in getting right of entry to bases as well as assets of knowledge. It is likewise saw that the economically underprivileged Parents are fewer talented to have enough money to the price of schooling of their children at advanced positions and so they do not work at their fullest possible.

Effects of truancy

Continuous absence can be portrayed by way of unexcused nonappearances from school by a slight that outdo the amount of such nonappearances permitted. Additionally, most of students who encounter the chronic impacts of ceaseless nonappearance begin from relations who do not have the advantages for empower the adolescents to make up for lost learning. Truancy harms more than the specific as well as his/her predictions. High absence as well as truancy degrees impact the achievement of the school overall slowing the amount of rule, which harms all students.

Effect of guardians' levels of education

The home condition furthermore disturbs the educational functioning of students. Educated Parents can deliver the kind of a setting that outfits greatest for educational attainment of their children. The school establishments can offer therapy as well as direction to Parents for producing optimistic home-based condition for advancement in students excellent of effort. Various academics said that the school functioning of students strongly depends at the parent participation in their school doings to activities to reach the advanced position of excellence in school achievement. Students with extraordinary position of financial status (SES) do well than the social class with average incomes students and the social class with average incomes students do well than the students with small level of socio-economic position owing to their Parents or household associate's participations in their schooling

School factor:

Most schools lack sufficient assets that enhance school functioning in school. Yadar (2001) perceived that no path in science as well as mathematics can be measured as whole devoid of comprising certain applied work. The applied work must to be approved by persons either in science laboratories or in classes. At school level, applied work is even more significant because of the circumstance that we study by achievement.

Step 4: Closing remarks

The members will be much-admired for their support, they will be asked to complete their work and they will in like manner be reminded when and where to meet for the following session

Step 5: Assignment

As a take home assignment, members will be asked for to work out what they understand by the term Solution-focused brief therapy and its qualities.

Session 4

Topic: Self-determination and intrinsic motivation to enhance mathematics Performance

Objectives: At the finish of the session, the members ought to be able to:

1. Define Self-determination and intrinsic motivation
2. Identify the difference between Self-determination and intrinsic motivation

Step 1: The participants will be welcomed warmly

Step 2: The researcher will review the assignment with the participants and provide accurate answers for all them

Step 3: The researcher will ask the participants to explain Self-determination and intrinsic motivation, the researcher will then explain Self-determination and intrinsic motivation and allow them to ask questions.

Self- determination hypothesis (Deci and Ryan, 1985, 1991), once practical to the area of teaching, is oriented mainly with endorsing in students an attention in knowledge, an appreciating of schooling, as well as a sureness in their individual dimensions plus qualities. These consequences are appearances of being naturally motivated as well as adopting standards plus controlling procedures. Investigation proposes that these procedures consequence in good knowledge as well as theoretical considerate, in addition to improved individual development in addition to change. Inherently motivated practices are occupied with for their own particular purpose for the delight and fulfilment got from their performance. At the point when intrinsically motivated, individuals participate in exercises that intrigue them, and they do as such openly, with a complete feeling of wish and without the need of material prizes or imperatives (Deci and Ryan, 1985). The youngster who recites a book for the inalienable delight of doing as such is intrinsically motivated for that action. Intrinsically motivated practices speak to the model of self- determination they exude from the self and are completely supported.

Step 4: Closing remarks

The members will be complimented for their collaboration, they will be urged to get their work done and they will likewise be reminded when and where to meet for the following session

Step 5: Assignment

As a take home assignment, members will be requested to work out what they comprehend by the term Solution-focused brief therapy and its characteristics.

Session 5

Topic: Learning behaviour modification in form of avoiding subjective comparison with other students in class against poor mathematics performance

Objectives: At the end of the session, the members ought to have the capacity to:

- Grow a positive, focus and response in addressing students' poor performance in mathematics and how to handle them.
- They should be able evaluate development in learning mathematics

Step 1: The participants will be welcomed affectionately

Step 2: The researcher will review the assignment with the members and provide precise responses to all them

Step 3: The researcher will ask the participants to explain what it takes to be happy in life.

Step 4: The researcher will then explain positive thinking to the participants and advise them to stop comparing their scores with their classmates which always make them sad when their peers get higher marks which probably cause their low self-concept in mathematics. The participants will be allowed to ask questions. Life is a blessing. One should strive to make it worth living, which is possible when the attitude of a person changes towards life in a positive manner. A positive attitude is something that everybody strives for, but this is something one has to imbibe, it cannot be bought. Positive thinking leads to better learning, followed by success and happiness. It is a strategy to deal with problems and to move towards success. Everybody has a time when they do not have a positive attitude about themselves and their lives. Optimistic feelings can aids to manage further without difficulty with the everyday matters of lifetime. It takes hopefulness in lifetime, as well as makes it at ease to evade doubts plus bad reasoning. It is truly said- "Nothing changes until you change, everything changes once you change". If one can embrace it as a lifestyle, it would get gainful changes in our lives which will be worth living. Positive attitudes how the brilliant side of life and anticipate that the best will happen. Humans perceive their life according to the circumstances. Success creates positivity and failure creates negativity in the attitude of people towards life .But this is not the end of the world. If one would look to a shining side of life, then life will glitter

Constructive reasoning plans to enable individuals to be more mindful of the energy of their contemplations and states of mind and how to oversee them keeping in mind the end goal to lead more joyful and more effective lives. People carrying positive attitude perceive the word impossible as 'I am possible'. Positive attitude says: You can achieve success.

Developing an inspirational disposition prompts happiness, motivates for progress and can change the entire life. Negative attitude says: you cannot achieve success. Things are impossible for people carrying negative attitude. When any negative event happens, people try to set their frame of mind that it will last forever. One should get rid of pre-judgmental, bad opinions plus performance, as well as change direction in the lead to a better-off as well as extra fruitful lifetime by absorbing hopefulness.

Hopefulness originates from the Latin word optimum, meaning "finest," which defines the way a hopeful individual is continuously observing for the greatest in some condition as well as looking forward for decent things to occur. Hopefulness is the propensity to be certain of, imagine or confidence that things will go out fine. Regardless if something evil occurs, like the loss of an occupation, an idealist understands the grey reinforcing. Professor Martin Seligman - an American analyst popular for his work on learned positive thinking. Seligman's work highlights contentment as opposed to progress and he trusts that idealism is a standout amongst the most imperative variables. What is important, he contends, is the way that individuals translate the end result for them and how they think around an optimistic or bad occasion in their exists.

Step 5: Counsellor gave talks on ways to develop positive attitude:

- Live your life as if there is no life tomorrow. Find positivity in every circumstances of life.
- Love yourself completely and accept everything that you are.
- Choose to be optimistic to make life colourful.
- Stay cool and calm. Losing self-control for the actions of others is not wisdom.
- Laughter is the best medicine. Smile as much as you can.
- Believe in yourself. Do your part well, do not think of the outcomes.
- Everybody face problems in life .Do not let these problems come in your way to happiness. Discussing the problems can lessen the burden of mind.
- Accept criticism. Take it as a move towards perfection.
- Company affects our attitude. If your friends or relatives have a negative attitude and negatively affects your attitude, then change the company and associate with positive people.
- Do what makes you happy and try to understand yourself more. In this way you will be able to easily make out as to with reference to what influences you to dishearten and will be competent to avoid the states of tension and frustration.

- Learn to value all that you have in your life. Your family, companions, career, home, sustenance, auto, and so on, is sufficient to make an uplifting mentality. We must be thankful for everything we have and enjoy the good things in life.
- Life moves on and never remains the same, and so the bad times.
- Live in the current. The previous cannot be changed as well as the upcoming is uncertain. Live life fully.
- Never gossip. You will get nothing.
- Be your best all the time.

Step 6: CONCLUSION

Optimism is a tendency to expect good things in the future. The majority of our sentiments, convictions and information depend on our interior contemplations. Idealists exist lengthier, have improved operative protected structures as well as handle something successfully well with tough situations.

Step 7: Closing remarks

The participants will be commended for their cooperation, they will be encouraged to do their homework and they will also be reminded when and where to meet for the next session.

Step 8: Assignment

As a take home assignment, members will be solicited to clarify the significance from positive reasoning and its pertinence towards mathematics self-concept.

Session 6

Topic: Solution focused Brief therapy on mathematics self-concept and achievement

Objectives: At the finish of the session, the members ought to have the capacity to:

- What self-concept is as well as its importance on mathematics achievement
- Know how relevance Solution focused Brief Therapy Treatment is on mathematics self-concept and achievement
- Work towards having high concept in mathematics

Step 1: The participants will be welcomed warmly

Step 2: The researcher will review the assignment with the members and provide exact responses to all them

Step 3: The researcher will ask the participants about what they think about themselves

Step 4: The researcher explain solution focused brief therapy treatment and mathematic

Studying learning disorders among secondary students has been the field of interest among researchers. It is possible for gifted students to have unhealthy self-perception in

mathematics due to the gap between learning problems and their exceptional cognitive ability. Riding on the bandwagon of the cognitive revolution, self-theorists conceptualised the self as a cognitive construction that is quite functional in bringing organisation and meaning to one's experiences (Rader, 2011).Self-perception denotes to the person's feelings and cognition of him/herself plus their contact (the individual's cognition and feelings) in reciprocal effect and adjusting to the individual's around world. It is possible for the children with learning low self-concept in mathematics to experience several defeats to achieve faster deficiency in perceiving their merits while being likened to their age group with great self-concept in mathematics. This faster deficiency most probably is the conflict and failure in case of continued educational problems (Jordan, 2004).Therefore, since the unhealthy self-perception can affect different educational and non-educational aspects of these children including their performance in mathematics, working in order to increase and improve their self-perception in form of given treatment to these students by counselling them is able to play a prominent role in growth and divulgence of their abilities and aptitudes.

Step 5: Closing remarks

The participants will be commended for their cooperation, they will be encouraged to do their homework and they will also be reminded when and where to meet for the next session..

Step 6: Assignment

As a take home assignment, participants will be asked to explain why it is important for them to be counsel on their mathematics ability

Session 7: Topic: Social comparison

Objectives: At the end of the session, the members ought to have the capacity to know:

- The significance of social comparison
- Upward and downward social comparisons
- The advantages and disadvantage that upward and downward comparison have on their school subjects

Step 1: The participants will be welcomed lovingly

Step 2: The researcher will review the assignment with the members and provide accurate answers for all them

Step 3: The researcher will ask the participants the importance from peers groups. The researcher will explain social comparison peers group to the students.

A focal principle the social comparison theory holds is that individuals assess themselves by contrasting their qualities and results and others (Festinger, 1954). Individuals feel better when compared with the individuals who are more worse (downward comparison) and feel down when compared with those exceptional (upward comparison), which infers that students who go to academically selective schools will encounter lower academic self-concepts than students who have proportional capacities but go to less academically selective schools.

It is recognised that high-achieving age groups definitely effect the individual attainments of all group members. Simultaneously, it has been revealed that the self-concept of students inclines to decline in the existence of high-achieving age groups, as persons create comparative rulings of their skills regarding their age group. Students with average act sense more self-assured about their skills in a group of deprived successful person (the Big-Fish-Little-Pond Effect – BFLPE – presented by H.Marsh). Conversely, apparent respect of a school improves the self-assurance of students as persons have a tendency to "bask in the glory" of others (the "reflected glory" result)

The concepts involving a frame of reference have been in use over a hundred years. In the context of our study, the notion of frame of reference is gotten from the social comparison theory proposed by Festinger [1942a; 1942b]. He found that an individual's self-assessment abilities depend on his or her self-identification with a more or less successful group.

This group defines a specific norm of behaviour, achievement, etc., which becomes the reference point for the individual and therefore increases or decreases his or her expectations and aspirations. The frame of reference defines the group used by the individual for social comparison in the process of build in a set of self-perceptions. The individual may choose different frames of reference (more or less successful), which will affect his or her self-perception and self-assessment [Altermatt and Pomerants, 2005]. Students can therefore be advised to have confidence in themselves and stop using their peers to judge their performances in school as this will affect their academic achievement generally.

Step 4: Closing remarks

The participants will be commended for their cooperation, they will be encouraged to do their homework and they will also be reminded when and where to meet for the next session.

Step 5: Assignment

As a take home assignment, members will be solicited to clarify the importance of upward comparison and downward comparison and tell which one out of the two is good for their mathematics self-concept

Session 8

Topic: General Appraisal, Post-Experiment Test Administration and Conclusion

Objectives: At the conclusion of the session, the members ought to have the capacity to:

- Sum up their experience in light of what they have profited from the different abilities they have learnt since the initiation of the program.

Respond to the post-test administration

Step 1: The members will be invited warmly

Step 2: The researcher will review the assignment with the participants and give precise responses to all them

Step 4: A sort of interactive discussion occurred between the specialist and the members to find out the impact of the helpful program. Exercises of the past sessions will be pretended to see the viability of the treatment.

Step 5: The members managed the post-test instruments. The specialist welcomed the members for their participation, the little blessing bundle for them was given to them .

Step 6: Closing remarks

The researcher will commend the members for their participation

Step 7: The members will be urged to use viably the aptitudes they will learn by means of the intercession program.

APPENDIX IX

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

INSTITUTE OF EDUCATION

UNIVERSITY OF IBADAN,

IBADAN, NIGERIA.

THERAPEUTIC TREATMENT PACKAGE

Control Group:

TOPICS

1. Addition and Subtraction
2. Multiplication and Division
3. Development of Number systems - Counting of Numbers.
4. Development of Number systems - Symbols for Numbers
5. Factors and Multiples
6. Highest Common Factors
7. Lowest Common Multiples

Session 1: Objective: Introduction, selection of research participants, establishing rapports.

Step 1: Administering of pre-test instruments

Step 2: The researcher will also explain to the participants that the programme is strictly for research purposes

Step 3: Introduction to basic operations (Addition and subtraction)

Step 4: Add and subtract whole numbers

Step 5: Add, subtract and and simplify elementary fractions and decimals.

Step 6: Assignment were giving to the participants

Closing remarks

Step 7: The participants was commended for their cooperation.

Step 8: They were also reminded when and where to meet for the next session.

Session 2:
Objective: Students were taught multiplication and division.

Step 1: Ask participants if they did the assignment given to them during the previous session

Step 2: Researcher gave corrections to the last assighnmant

Step 3: Introduction to topic of the day - multiplication and division

Step 4: Multiply and divide whole numbers

Step 5: Multiply, subtract and simplify elementary fractions and decimals

Step 6: Assignment were giving to the participants

Closing remarks

Step 7: The participants was commended for their cooperation.

Step 8: They were also reminded when and where to meet for the next session.

Session 3:
Objective: Students were taught counting of numbers.

Step 1: Ask participants if they did the assignment given to them during the previous session

Step 2: Researcher gave corrections to the last assighnmant

Step 3: Introduction to topic of the day - counting of numbers

Step 4: Count in tens and other number groupings (e.g. twenties, sevens, sixties)

Step 5: Add and subtract numbers using a simple paper counting board.

Step 6: Assignment were giving to the participants

Closing remarks

Step 7: The participants were commended for their cooperation.

Step 8: They were also reminded when and where to meet for the next session.

Session 4
Objective: Students were taught Symbols for numbers.

Step 1: Ask participants if they did the assignment given to them during the previous session

Step 2: Researcher gave corrections to the last assighnmant

Step 3: Introduction to topic of the day - Symbols for numbers

Step 4: Write Roman and Hindu-Arabic numerals

Step 5: Assignment were giving to the participants

Closing remarks

Step 6: The participants were commended for their cooperation.

Step 7: They were also reminded when and where to meet for the next session.

Session 5
Objective: Students were taught factors and multiples.

Step 1: Ask participants if they did the assignment given to them during the previous session

Step 2: Researcher gave corrections to the last assighnmant

Step 3: Introduction to topic of the day - Factors and Multiples

Step 4: Define and identify prime numbers

Step 5: Find the factors of a given whole number

Step 6: Express a number as product of its factors in index form.

Step 7: Assignment were giving to the participants

Closing remarks

Step 8: The participants were commended for their cooperation.

Step 9: They were also reminded when and where to meet for the next session.

Session 6
Objective: Students were taught Highest common factors.

Step 1: Ask participants if they did the assignment given to them during the previous session

Step 2: Researcher gave corrections to the last assighnmant

Step 3: Introduction to topic of the day - Highest common factors

Step 4: Find the Highest common factors (HCF) of two or more whole numbers.

Step 5: Write down two or more multiples of of a given number

Step 6: Assignment were giving to the participants

Closing remarks

Step 7: The participants were commended for their cooperation.

Step 8: They were also reminded when and where to meet for the next session.

Session 7

Objective: Students were taught Lowest common multiples.

Step 1: Ask participants if they did the assignment given to them during the previous session

Step 2: Researcher gave corrections to the last assighnmant

Step 3: Introduction to topic of the day - Lowest common multiples

Step 4: Find the Lowest common multiples (LCM) of two or more whole numbers

Step 5: Assignment were giving to the participants

Closing remarks

Step 6: The participants were commended for their cooperation.

Step 7: They were also reminded when and where to meet for the next session.

Session 8: Topic: Administration of post-test instruments.

Step 1: The post-test instruments will be administered on the participants

Step 2: A counselling talk was given to them on the importance of their total self (self-concept) and the importance of self-concept on their performances in mathematics.

Step 3: A token gift was be given to them

Step 4: Closing remarks

Step 5: The investigator commended the members for their participation

Step 6: The members was urged to use viably what they learnt in the topics taught them.

APPENDIX X

INTERNATIONAL CENTRE FOR EDUCATIONAL EVALUATION

INSTITUTE OF EDUCATION

UNIVERSITY OF IBADAN,

IBADAN, NIGERIA.

Common Entrance Records (CER)

S/N	Name Of Students	Exam Number	Common Entrance Record

A	**ABADINA COLLEGE**		
1.	1	020020031934003	81
2.	2	140550031633022	78
3.	3	141190161630707	77
4.	4	02121026	85
5.	5	14056029	83
6.	6	140830161873738	79
7.	7	06038006167038	78
8.	8	141710021635926	78
9.	9	020020031912640	84
10.	10	02003007160043	82
11.	11	020020031634005	83
12.	12	020020031619083	84
B			
13.	1	08180091861709	74
14.	2	140550031630978	70
15.	3	060380061617024	72
16.	4	021360131914735	68
17.	5	140830161873695	76
18.	6	060080081891749	70
19.	7	020440101649104	77
20.	8	060290020194544	67
21	9	080190051868792	72
22.	10	080440021862186	74
23.	11	020940021632548	76
24.	12	020420101912497	82
C			
25.	1	061080086271804	64
26.	2	062160170196893	70
27.	3	080110041677794	49
28.	4	080320061861767	58

29.	5	080040041627086	79
30.	6	080310011861025	65
31.	7	081080101626499	77
32.	8	062030181674029	60
D			
33.	1	141290101633703	83
34.	2	141010141915304	77
35.	3	141010141915505	70
36.	4	141010141915506	77
37.	5	069910130196655	82
38.	6	141180101630151	82
39.	7	141290101633746	75
40.	8	140040071916145	81
E			
41.	1	100520201875511	68
42.	2	251230011625004	64
43.	3	100410181875006	65
44.	4	092110121676261	50
45.	5	090390101869672	66
46.	6	091410131611595	62
47.	7	10017012876065	65
48.	8	100340051879910	67
49.	9	100560201875628	81
F			
50.	1	102031201609027	86
51.	2	101140061609493	80
52.	3	100560201609898	79
53.	4	1005602016098889	84
54.	5	10056020160982	75
55.	6	101346824561405	72
56.	7	1005002018757002	78
57.	8	100560201875626	81

58.	9	100490141878345	72
59.	10	100560201875626	81
60.	11	090370131869618	84
61.	12	100950181677550	84
G			
62	1	096320819068716	82
63.	2	094589102314451	82
64.	3	092361089108890	82
65.	4	060038971719700	72
66.	5	140236890111823	77
67.	6	09963570162001	82
68.	7	080634041616390	72
69.	8	096889165444780	77
70.	9	098864321022334	68
H			
71.	1	251740231886732	83
72.	2	250270071625539	83
73.	3	091060131871645	79
74.	4	250110181625357	84
75.	5	252170211898968	87
76.	6	090150021871083	83
77.	7	090330021871278	76
78.	8	250300621189541	77
79.	9	091710101867029	73
80.	10	250110181899937	84
81.	11	250290111881495	80
82.	12	080160021871108	82
I			
83.	1	250280231895653	89
84.	2	09045065	74
85.	3	020410021913586	83
86.	4	250280231895636	92
87.	5	100560201609877	87

88.	6	250280231895648	82
89.	7	09037081	83
90.	8	09010617	79
91.	9	09182015	83
92.	10	09036	87
93.	11	090370131869610	84
94.	12	09037077	87
J			
95.	1	030650011643724	65
96.	2	030900060190059	89
97.	3	030540071920046	77
98.	4	020530081912560	73
99.	5	030460031641631	69
100	6	030240081641582	60
101	7	299590021636980	75
102	8	030650011643795	83
103	9	030900060190055	70
K			
104	1	030578943569911	76
105	2	030840061641815	69
106	3	300480081636308	74
107	4	300740081634581	78
108	5	280690020195197	64
109	6	030570081651412	71
110	7	300020050191648	72
111	8	030220050191648	75
112	9	030460031641683	75
113	10	030234362334311	80
114	11	030730041643916	64
L			
115	1	03060041646018	69

116	2	030730041643970	74
117	3	030730041643914	70
118	4	03060041646032	69
119	5	030730041643977	70
120	6	030730041643924	63
121	7	030456731129128	69
122	8	030730041643988	70
123	9	030730041643991	72
124	10	030231541123981	65
125	11	030730041643998	65
126	12	030048691152997	70