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Article

An Appraisal of PROCESS and REACH Model on Forgiveness, Anger and Depression among Adolescents in Junior High Schools in Nanumba North Municipality, Ghana

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Abstract: The purpose of the study was to examine the effect of REACH and Process Models on forgiveness, anger and depression among 11- to 19-year-old adolescents in junior high schools in Bimbilla in the Northern Region of Ghana. The study employed a mixed-method design. The population for the study comprised all junior high school students totalling 3632. Of this number, 1,888 (55%) of the students were males, while 1744(45%) were females. The accessible population was 1,636 from eight (8) JHSs with 952(55%) of them being boys and the remaining 684(45%) being girls. The participants were selected based on their low levels of forgiveness and high levels of anger and depression determined by the Depression Mode Scale and Anger Self-Report. Purposive and simple random sampling techniques were used to select 60 participants for the study, with each group having 20 participants. The main instruments used for the study are questionnaires (Enright Forgiveness Inventory (EFI). Anger self-report questionnaire (ASR), and Depressed Mood Scale (DMS) and semi-structured interview guide. One-way Analysis of Covariance (ANCOVA) was used to test the hypotheses. The study indicates that both the REACH model and PROCESS model have the efficacy in enhancing forgiveness among adolescents. The study also revealed that the REACH model and Process model have efficacy in reducing levels of depression among adolescent students. It is recommended that Counselling Centres should be set up by District Education Offices and the District Assemblies in the community so that students can visit the centre anytime they feel hurt. Regular seminars, lectures and symposia should be organized regularly by Counsellors and Psychologists using the efficacy of forgiveness therapies (Process and REACH Therapies) for students to be sensitized on the need to patronise forgiveness interventions. It is also recommended that the Government should provide adequate funds and support to encourage the conduct of research in forgiveness counselling since it is a new concept in Africa and Ghana in particular.

Keywords: Forgiveness, Anger, Depression, Adolescents, Junior High Schools

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1. Introduction

Forgiveness education, which begins in schools, can assist in breaking the cycle of future violence that continues to be a problem in Bimbilla. If these adolescents are given the means to forgive wholeheartedly as they grow up, they will have a greater understanding of people who have wronged them and will be able to pass these tools on to the generation after them. The concept of forgiveness has roots in ancient philosophical, theological and historical traditions. Forgiveness concepts are presented in ancient faiths and philosophies as a kind of morality based on mercy [1, 2]. What genuinely constitutes forgiveness is a person-to-person response to injustice that causes the party who was wronged to renounce their right to hold grudges against the offender and eventually

influences the other party to acquire compassion, caring and even moral love for them. Forgiveness is a mental and emotional process that eliminates prolonged animosity, rumination, and the negative consequences that come with them [3]. Following traumatic events or interpersonal disputes, psychotherapeutic methods have used forgiveness to help patients adaptively manage anger and bad affect [4, 5]. Forgiveness is a powerful tool for managing unpleasant emotions [6, 7]. It brings a decrease in anger and resentful feelings, thoughts, and behaviours, as well as an increase in positive attitudes towards the offending individual when people forgive [8]. It has also been found that encouraging forgiveness improves anger control while lowering trait anger and anger expression-out/anger expression-in. [9, 10].

In Ghana, there has not been a deliberate attempt at conducting a study on forgiveness education and its effects on mental health and its antecedents such as anger, depression, anxiety and hopelessness among junior high schools. Furthermore, there has been no study sighted in the literature about the effects of REACH and Process Models in reducing forgiveness among Ghanaian Junior High school students [11, 12]. In another attempt at studying the effects of forgiveness on Ghana's development, the Department of Psychology, University of Ghana, in collaboration with the Department of Psychology, Virginia Commonwealth University, USA have also organized a five-day Emerging Forgiveness Researchers' Conference in Ghana. The Conference is part of a bigger project funded by the Templeton World Charity Foundation, Inc. was held between January 11-15, 2016 at the Erata Hotel in Accra and Coconut Grove Regency Hotel in Elmina. The study will find out how one's difficulty to forgive could be related to anger and depression: the inability to forgive could increase anger, facilitating the onset of depressive symptoms. Based on these considerations, the study would test a model that encompasses forgivingness, anger, and depressive symptoms. While some authors have found an inverse relationship between forgiveness and depression and forgiveness and anger and between depression, surprisingly no study has investigated, so far, the mediational role of anger in the relationship between forgivingness and depression [13, 14-15]. The purpose of this study was to examine the effect of REACH and Process Models on forgiveness, anger and depression among 11 to 19-year-old adolescents in Junior High Schools in Nanumba North Municipality, Ghana. The study was guided by hypotheses and a research question. The following hypotheses were tested and guided the conduct of this study:

$H_0$1: There is no significant effect of Process and REACH models on forgiveness among adolescents in JHS in Bimbilla.

H_A1: There is a significant effect of Process and REACH models on forgiveness among adolescents in JHS in Bimbilla.

$H_0$2: There is no significant effect of Process and REACH models on anger among adolescents in JHS in Bimbilla.

H_A2: There is a significant effect of Process and REACH models on anger among adolescents in JHS in Bimbilla.

$H_0$3: There is no significant effect of Process and REACH models on depression among adolescents in JHS in Bimbilla.

H_A3: There is a significant effect of Process and REACH models on depression among adolescents in JHS in Bimbilla.

The study also sought to answer this research question - What are the effects of the interventions on forgiveness, anger and depression among adolescent JHS students who experienced hurt or pain based on gender?

1.1. Conceptual Framework

Based on the objectives of this study, the following conceptual framework is developed to be explored in this study. Forgiveness is not only viewed as the reduction of anger, depression and unforgiveness through reducing negative thoughts, emotions, motivations and behaviour toward the offender but also as the increase of positive emotions and perspectives such as empathy, hope or compassion.

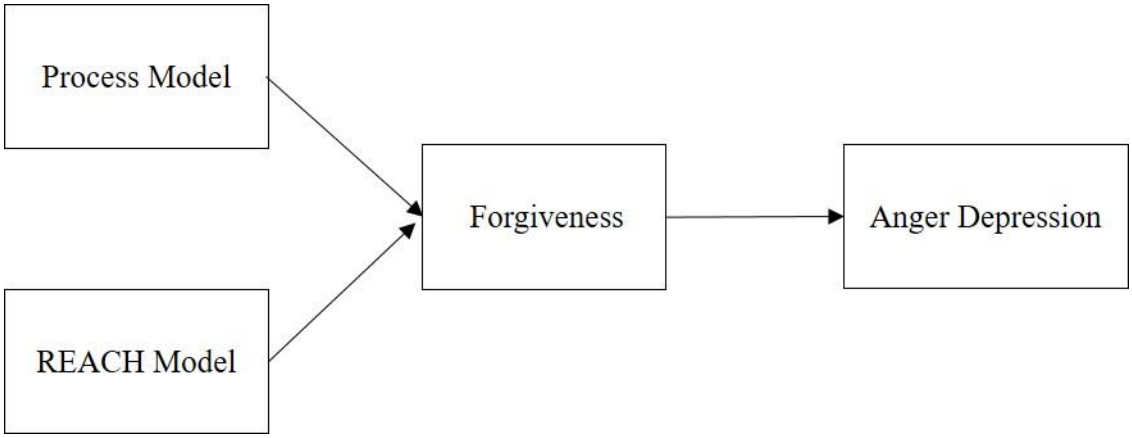

Figure 1. A model of predictability of Process and REACH model of intervention on Forgiveness and its Relationship with Anger and Depression.

Looking at the conceptual framework, it is clear that anger and depression have not directly been treated but assessed in the study. This is because anger and depression are not directly measured in the study. They are distal measures [16]. The main target of the study is to measure forgiveness using the Process and REACH Models. Forgiveness is a proximal measure that is the variable directly measured [16]. Considering the relationship between forgiveness, anger and depression as mental health variables, it is clear that when forgiveness is increased, there will be high levels of forgiveness, positive affectivity, positive behaviour and positive cognition toward the transgressor and anger and depression would also be ultimately reduced towards the perpetrator of the hurt and the person who is hurt respectively. On the contrary, if there exists an increase in unforgiveness, there would be a low level of forgiveness, negative affectivity, negative behaviour and negative cognition which will also lead to an increase in anger, high level of depression, negative affectivity, negative behaviour and negative cognition.

In this Framework, forgiveness education is the independent variable, whereas Anger and depression are the dependent variables with personal variables being age and gender. The conceptual base of this experimental study is that forgiveness, anger and depression are mental health constructs which are functions of emotions. This suggests that if participants are taken through a well-designed intervention programme such as Forgiveness Education (Process and REACH Models) the level of forgiveness attitude will improve leading to a drastic reduction of anger and depression among participants (see Figure 1).

1.2. Personality Theory of Forgiveness

People differ in their implicit theories about the malleability of key individual attributes. While some people hold the view that traits are fixed (entity theorists), others believe that they can be changed (incremental theorists). As these beliefs set up an

interpretive framework for forming impressions and shaping attributions, they may affect victims' responses to interpersonal transgressions. The personality theory of forgiveness is an integrated theory which was propounded by Worthington with its components as personality, spirituality stress and coping [17]. The theory gives much attention to forgiveness, the importance of personality and its influence on the disposition to forgive. Forgiveness has been studied as a trait called forgivingness, a disposition toward benevolence instead of anger and resentment and to live in harmony with others [18]. Forgiveness is correlated to a higher order of personality factors such as those in the five factors (big five) personality taxonomy namely openness to experience, conscientiousness, extraversion, agreeableness and neuroticism [19].

The personality traits of an individual and how he or she can be expected to typically respond to the environment are not difficult to recognise [20]. The disposition to forgive is related most strongly to two dimensions; thus, agreeableness and emotional stability [19]. Agreeableness is a personality dimension that incorporates traits such as altruism, empathy, care, and generosity. Trait theorists and researchers rated agreeable people highly on descriptors such as 'forgiving' and low on descriptors such as 'vengeful'. Highly agreeable people tend to succeed in the interpersonal realm than less agreeable people do [19]. Narcissism, neurotic defences, emotional non-disclosure and inability or reluctance to empathise are obstacles to forgiveness [21]. Studies have established that the interpersonal dimension of personality is linked to forgivingness whereas the intrapersonal dimensions were not much linked. Intrapersonal traits such as anger, rumination, and anxiety are negatively correlated with forgiveness. Forgiveness is thus positively related to characteristics such as agreeableness, altruism generosity and gratitude [22].

Personality theorists believe that emotional stability is a personal dimension that involves low vulnerability to experience negative emotions and that emotionally stable people tend not to be irritable or overly sensitive. Several studies demonstrated that people who are emotionally stable score higher on measures of disposition to forgive than those who are not [19].

2. Materials and methods

This study adopted the Pragmatist's philosophy. The pragmatist philosophy of science indicates that "...the mandate of science is not to find truth or reality; the existence of which is perpetually in dispute, but to facilitate human problem solving" [23]. In determining the approach for the study of the Effects of REACH and Process Models on forgiveness, anger and depression among adolescents in JHS in Bimbilla, the philosophical assumptions and their ontological and epistemological positions guided the decision. The mixed methods experimental design was used for the study. The mixed-methods experimental (or intervention) design is a mixed-methods approach in which the researcher embeds the collection, analysis, and integration of both quantitative and qualitative data within an experimental quantitative research design [24]. The design consists of three groups, the researcher had two experimental groups formed and one control group also formed after they had answered a questionnaire at the pre-test phase. All three groups will take a pre-test after which the treatment groups will be given the experimental treatment (REACH and Process interventions). The control group received no treatment and each group was post-tested at the end of the study. The post-test scores on the dependent variables were compared to ascertain the effectiveness of the treatment. After the intervention was completed, research questions were used to interview participants who had undertaken the intervention. This was intended to integrate the results of the interventions into the qualitative results to satisfy the justification made for the choice of mixed method experimental design -that when qualitative data is collected after an intervention/experiment, such data explored in more detail the outcome results

of the intervention and such data helps to explain why the intervention worked or did not work.

The population of the study comprised three thousand six hundred and thirty-two (3632) adolescents in Junior High Schools in the Nanumba North Municipality of the Northern Region, Ghana. A purposive sampling technique was used to select eight JHS for the study. Demonstration JHS, Jilo JHS "A", Jilo JHS "B", Bimbilla JHS, Our Lady of Fatima JHS, Central JHS "A", Central JHS "B" and Nuria JHS. The three instruments (Enright Forgiveness Inventory, Depression Mood Scale and Anger Self-Report) were first administered to the accessible population of 1636 students, out of which 348 students qualified by the criteria set out in the instrument which is, the students scored below 210 of the EFI. The students consisted of 125 females and 223 males. A simple random sampling technique was used to select sixty (60) respondents from the 348 qualified students who responded to the Enright Forgiveness Inventory, Depression Mood Scale and Anger Self-Report items. According to Creswell, 60 participants in a mixed-method experimental design is enough since it will provide insights into the value that underlies the goals of the therapy [25]. Krejcie and Morgan's table of determination of sample size selection also guided the decision. It ensured fair distribution of the population and gender [26]. Therefore, the total number of students who took part in the pre-test was made up of sixty (60). Thirty (30) males and thirty (30) females. The pre-test scores were used to determine participants who are unforgiving and have anger and depression problems. Participants who are unforgiving and have anger and depression problems were further randomly sampled using simple random sampling. Participants that are twenty (20) formed each of the groups, two experimental groups and one control group.

Purposive sampling was utilised to sample 3 of the participants to be interviewed. The interviews were conducted after the intervention had been done. The participants were from both the experimental groups and the control group. The purpose was to confirm or disconfirm the quantitative (quasi-experimental) study's results- to provide personal, contextual, and qualitative experiences drawn from the setting or culture of the participants along with the quantitative outcome measures.

The main instruments for data collection were questionnaires and semi-structured interview guides. The questionnaire had three main scales which were adapted for the collection of data, they are the Attitude Scale or Enright Forgiveness Inventory (EFI) developed. This inventory is identified to be the most commonly used measure of forgiveness. The EFI consist of sixty 60-item objective self-report measurement of the degree of interpersonal forgiveness, equally divided into six components: the instrument is a 60-item scale consisting of three primary subscales (affect, behaviour, and cognition) to assess six areas of forgiveness (absence of negative affect, presence of positive affect, absence of negative cognition, presence of positive cognition, absence of negative behaviour, and presence of positive behaviour toward the offender). The range is from 60-360, with high scores representing high levels of forgiveness.

The EFI total score ranges from 60 (low degree of forgiveness) to 360 (high degree of forgiveness). The average score is 210. Participants who scored below 210 on the scale were considered for treatment. They were deemed to have unforgiveness issues. In addition, there are five items assessing pseudo forgiveness (e.g., denial and condoning) whose score ranges from 5 to 30.

The Depressed Mood Scale, 20-item Center for Epidemiological Studies Depressed Mood Scale (CES-D) was used to measure depressive symptomatology [27]. Participants were instructed to indicate how they felt or behaved in a certain way when offended. The instrument is rated on a 4-point Likert scale format to assess response, with response possibilities ranging from 1 (Rarely or none of the time) to 4 (Most or all of the time).

Anger Self-Report (ASR) is a 30-item scale questionnaire which measures a general anger factor using items from the original 89-item ASR. This shorter questionnaire has high reliability and has a relatively brief scale. Norms have been included for the 30-item

scale, derived from the responses of 101 male and 100 female students. The ASR questionnaire distinguishes between awareness of anger, expression of anger, and the amount of guilt and mistrust.

The data uses frequencies and percentages. The statistical software that was used to analyse the data was the Statistical Product for Service Solutions (SPSS) version 21. The research questions were addressed using thematic analysis. The researcher used the One-way Analysis of Covariance (ANCOVA) to analyze Hypotheses 1-3, was used. The use of ANCOVA helped control extraneous variables.

3. Results

3.1. Effect of PROCESS and REACH Models on Forgiveness, Anger and Depression

Hypothesis One

$H_0$1: There is no significant effect of Process and REACH models on forgiveness among adolescents in JHS in Bimbilla.

H_A1: There is a significant effect of Process and REACH models on forgiveness among adolescents in JHS in Bimbilla.

This hypothesis examined the effect of Process and REACH models on the level of forgiveness among adolescents in JHS in Bimbilla. The purpose is to find out whether the three groups (Process model, REACH Model and Control Group) are different on the level of forgiveness while controlling for their pre-test scores. The outcome variable was the post-test forgiveness score whereas the pre-test forgiveness score served as a covariate. The one-way ANCOVA was used to conduct and compare the post-test scores for adolescents in the experimental groups and the control group while controlling for their pre-test scores. The results of the test for the effects are shown in Table 1.

Table 1. ANCOVA Test for Effect of Process and REACH Models on Forgiveness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	η_p^2
Corrected Model	21067.158	3	7022.386	28.289	.000	.602
Intercept	24458.660	1	24458.660	98.528	.000	.638
Forgiveness	12963.024	1	12963.024	52.220	.000	.483
Group	2329.695	2	1164.847	4.692	.013*	.144
Error	13901.426	56	248.240			
Total	1706639.0	60				

Source: Field Survey (2021); *Significant at .05 level

As presented in Table 1, the results revealed that after controlling for the forgiveness pre-test scores, there was a significant difference in the post-test forgiveness scores for the experimental groups and the control group, F (2, 56) = 4.692, p = .013, η_p^2=.144. This suggested that the groups (Process model, REACH model and control groups) contributed about 14.4% of the variations in the level of forgiveness. Additionally, multiple comparison analysis was performed to compare the group means to determine where the differences in means scores were coming from. Table 2 presents pairwise comparisons.

Table 2. Sidak Adjustment for Pairwise Comparison (Forgiveness)

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.
Control	Process	-12.998*	5.351	.018
	REACH	-14.499*	5.065	.006
Process	Control	12.998*	5.351	.018
	REACH	-1.501	5.089	.769
REACH	Control	14.499*	5.065	.006
	Process	1.501	5.089	.769

The mean difference is significant at the .05 level.

The results from the post-hoc analysis revealed a statistically significant difference in forgiveness levels between participants in the control group and those in the REACH model group (p=.006) (Table 2). Similarly, a significant difference in the level of forgiveness was found between participants in the control group and the Process model group (p=.018). However, no significant difference was found between participants in the REACH model and the Process model group (p=.769). The adjusted/marginal means for participants in each group are presented in Table 3.

Table 3. Estimated Marginal Means (Forgiveness)

Groups	Mean	Standard Error
Control	157.751[a]	3.650
Process	170.749[a]	3.661
REACH	172.250[a]	3.523

Source: Field Survey (2021)

The results in Table 3 showed that after controlling for the pre-test scores on forgiveness for participants in the groups, the marginal mean scores of the participants in the control group (M=157.751, SE=3.650) were less than those in the REACH model group (M=172.250, SE=3.523). The marginal mean scores for the participants in the Process model group (M=170.749, SE=3.661) were greater than those of the participants in the control group (M=157.751, SE=3.650). No significant difference was found in the marginal mean score between participants in the REACH model group (M=172.250, SE=3.523) and the Process model group (M=170.749, SE=3.661).

In summary, the outcome of the analysis revealed that both the REACH model and the Process model of forgiveness were effective in helping adolescents in JHS in Bimbilla to forgive persons who had offended them. It was established that the participants who were exposed to the two therapies (Process model and REACH model) showed a significant improvement in their level of forgiveness after the intervention had been administered. The results showed further that when both models were compared with the control group, they had the same level of effectiveness. This is to say that both therapies equally worked in terms of improving forgiveness among the adolescents in JHS in Bimbilla.

Hypothesis Two

$H_0$2: There is no significant effect of Process and Reach models on anger among adolescents in JHS in Bimbilla.

H_A2: There is a significant effect of Process and Reach models on anger among adolescents in JHS in Bimbilla.

This research hypothesis determined whether there was a significant difference in the levels of anger among the adolescents in the experimental group and those in the control group after the intervention. That is, the objective of this hypothesis determine whether the three groups (Process, REACH and control groups) were different in their anger level while controlling for their anger pre-test scores. The dependent variable was the post-test score on anger whereas the pre-test anger score served as a covariate. In testing this hypothesis, one-way ANCOVA was used to compare the post-test scores for participants in the experimental groups and the control group while controlling for their pre-test scores. The details of the analysis are shown in Table 4.

Table 4. ANCOVA Test for Effect of Process and REACH Model on Anger

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	η_p^2
Corrected Model	18929.268	3	6309.75	12.533	.000	.402
Intercept	836.168	1	836.168	1.661	.203	.029
Anger	1393.135	1	1393.135	2.767	.102	.047
Group	17189.012	2	8594.506	17.071	.000*	.379
Error	28193.465	56	503.455			
Total	187870.0	60				

Source: Field Survey (2021); *Significant at .05 level

The outcome of the analysis in Table 144 showed a significant difference in the levels of anger of the participants in the experimental groups and control group at post-test, F (2, 56) = 17.071, p< 001, η_p^2 =.379. The result suggested that the groups (Process, REACH Model and Control) explained 37.9% of the variations in the levels of anger among adolescents. A multiple comparison analysis was further performed to compare the estimated marginal group means for the groups and the details have been shown in Table 5.

Table 5. Post-hoc Analysis of the Groups Regarding Anger

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.
Control	Process	42.046*	8.554	.000
	REACH	44.166*	7.978	.000
Process	Control	-42.046*	8.554	.000
	REACH	2.120	7.185	.163
REACH	Control	-44.166*	7.978	.000
	Process	-2.120	7.185	.163

The mean difference is significant at the .05 level.

It can be observed from the results in Table 5 that there is a significant difference in the levels of anger of participants in the control group and those in the REACH model group (p<.001). A significant difference was also found in the anger mean scores of participants in the control group and those in the Process model group (p<.001). Thus, the study did not find any evidence of a significant difference among the participants in the REACH model group and those in the Process model group (p=.163). To understand the results better, the estimated marginal mean scores for anger were inspected as shown in Table 6.

Table 6. Estimated Marginal Mean Scores for Anger

Groups	Mean	Standard Error
Control group	77.171[a]	5.749
Process Group	35.125	5.390
REACH group	33.005	5.087

Source: Field Survey (2021)

The results, as displayed in Table 166, revealed that after controlling for the pre-test scores on anger for participants in the groups, the estimated marginal mean scores of the participants in the control group (*M*=77.171, *SE*=5.749) were greater than the mean scores of participants in the REACH model group (*M*=33.005, *SE*=5.087). Similarly, the marginal mean scores for the participants in the Process model group (*M*=35.005, *SE*=5.390) were less than those in the control group (*M*=77.171, *SE*=5.749). The levels of anger of the participants in the Process model group as compared to those in the REACH model group were not different. In conclusion, the outcome of the analysis has revealed that the REACH model and Process model helped reduce the level of anger among adolescents in JHS in Bimbilla. Participants demonstrated a sufficient and significant reduction in their levels of anger after their level of forgiveness increased.

Hypothesis Three

$H_0$3: There is no significant effect of Process and Reach models on depression among adolescents in JHS in Bimbilla.

H_A3: There is a significant effect of Process and Reach models on depression among adolescents in JHS in Bimbilla.

This research hypothesis examined whether the Process and REACH had a significant effect on the depression level of adolescents in JHS in Bimbilla. Statistically, the difference in the levels of depression of the participants in the experimental groups and control group was tested. This hypothesis, thus, tested whether the REACH and Process models significantly reduced the depression levels of the participants who were exposed to the therapies. The dependent variable was the post-test score on depression while the depression scores of the participant on the pre-test served as a covariate. The one-way ANCOVA was used to compare the post-test scores for participants in the three groups while controlling for their pre-test scores. The details of the analysis are shown in Table 7.

Table 7. ANCOVA Test for Effect of Process and REACH Models on Depression

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	η_p^2
Corrected Model	3579.362	3	1193.121	18.274	.000	.504
Intercept	1212.613	1	1212.613	18.572	.000	.256
Depression	2114.158	1	2114.158	32.380	.000	.375
Group	2224.811	2	1112.406	17.038	.000	.387
Error	3525.742	54	65.292			
Total	193274.00	58				

Dependent Variable: Depression Posttest; Source: Field Survey (2021)

As presented in Table 7, the results revealed a statistically significant difference in the depression mean scores of participants in the experimental and control groups at post-test, F (2, 54) = 17.038, p<.001. Furthermore, the result showed that the groups (Process, REACH Model and Control) explained 38.7% of the variations in the depression levels of the participants (η_p^2 =.387). Based on this result, a post-hoc analysis was conducted to

compare the estimated marginal group means for the participants in terms of depression. The outcome of the pairwise comparisons has been presented in Table 8.

Table 8. Pairwise Comparisons of the Groups on Depression Levels

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.
Control	Process	12.715*	2.672	.000
	REACH	13.829*	2.600	.000
Process	Control	-12.715*	2.672	.000
	REACH	1.114	2.625	.673
REACH	Control	-13.829*	2.600	.000
	Process	-1.114	2.625	.673

The mean difference is significant at the .05 level; Source: Field Survey (2021)

The results shown in Table 8 revealed that there is a significant difference in the levels of depression of participants in the REACH model group and those in the control group (p<.001). The study further discovered a significant difference in the levels of depression of participants in the Process model group and those in the control group (p<.001). No significant difference, however, was found in the depression levels of the participants in the REACH group and those in the Process group (p=.673). The estimated marginal mean scores for depression of the participants in the groups are presented in Table 9.

Table 9. Estimated Marginal Means for Depression

Groups	Mean	Std. Error
Control	65.370	1.835
Process	52.655	1.913
REACH	51.541	1.814

Source: Field Survey (2021)

As presented in Table 9, the result showed that after controlling for the pre-test scores on depression for participants in the three groups, the estimated marginal mean scores of the participants in the control group (M=65.370, SE=1.835) were higher than the mean scores of those in the REACH model group (M=51.541, SE=1.814). Likewise, the marginal depression mean scores for the participants in the control group (M=65.370, SE=1.835) were higher than those in the Process model group (M=52.655, SE=1.913). The mean scores for depression for participants in the Process model group and the REACH model group were not statistically different.

In sum, the outcome of the analysis of hypothesis three revealed that both the REACH model and Process model were effective in reducing levels of depression among adolescents in JHS in Bimbilla. It was found that the participants who were exposed to the two interventions (Process and REACH models) demonstrated a significant decrease in depression levels. Although the two interventions were found to be efficacious in reducing depression levels in adolescents, none of them were found to be more effective than the other. That is to say that the REACH model and Process model had similar levels of effectiveness in reducing depression.

3.2. Findings - Effects of the Intervention on Forgiveness, Anger and Depression among Adolescent JHS Students

Mixing the results, the qualitative findings were introduced to assess how the treatments worked and find out if there was any variation in the results. Specifically, the qualitative results of these research questions were compared with the findings from the hypotheses.

Research Question - What are the effects of the intervention on forgiveness, anger and depression among adolescent JHS students who experienced hurt in Bimbilla?

This research question sought to qualitatively examine the effect of the interventions on forgiveness, anger and depression among adolescent JHS students who experienced hurt in Bimbilla. Specifically, the qualitative results of this research question were compared with the findings from hypotheses *one, two and three*. The results are presented as follows.

3.2.1. Post-Intervention Responses

This section presents the themes that emerged from participants interviewed after the intervention. The themes that emerged were positive thoughts towards the offender and positive feelings towards the offender.

Positive Thoughts about Offenders

Almost all the participants described their thoughts about the offender as positive and refreshing after the intervention.

> *"Right now, my thoughts about the person are more positive and I am also trying to see if I can talk with him so that he will see the kind of change of behaviour that I have got." (Participant 3)*

> *"Now I wish him well so I don't have any negative thoughts about the person." (Participant 1)*

> *"I don't think bad about him at all." (Participant 2)*

Positive Feeling towards Offender

The responses of the participants revealed that they had a more positive feeling toward the offender. The participants opined that their feelings about the offender had changed and were willing to see things from the view of the offender. The information gained through the intervention that the process of forgiveness not only reduces the emotional distress associated with past hurts and offences but enhances more contentment and satisfaction in letting things go could be used to enhance optimal functioning in an individual. Below are some of what participants shared with the researcher:

> *"I no longer feel angry [sic] towards him after the intervention. I have even called him." (Participant 1)*

> *"Right now, I don't think I feel bad about the person. I will say I feel good about him." (Participant 2)*

> *"How I feel towards him has changed, right now the feeling is more positive than negative." (Participant 3)*

> *"I am okay because I don't think about what happened and feel hurt anymore." (Participant 2)*

> *"My feeling towards my uncle is not like before where the thought of him gets me angry." (Participant 3)*

Influence of the Lesson

The participants spoke about how their interaction with the researcher and the interventions has influenced their perception about holding on to offences and not

forgiving the offender. The participants explained that they have realised that there is no need to hold on to unforgiveness which has made them hate and hurt themselves severally.

> *"I have learned that hurt can destroy my life so I have to let go of the past based on the lessons." (Participant 1)*
>
> *"…because of what I have learned from our interactions I don't think it is even necessary to hold on to that hurt." (Participant 2)*
>
> *"From what I learned, there is no need to hold a grudge against the person who offended me so I have let go of everything." (Participant 3)*
>
> *"…because of the lessons I went through I don't want to hurt myself so I will say I have forgiven them." (Participant 2)*
>
> *"I will give him a space. Though I don't have anything against him." (Participant 1)*

4. Discussion

Hypothesis One

> *$H_0$1: There is no significant effect of Process and REACH models on forgiveness among adolescents in JHS in Bimbilla.*
>
> *H_A1: There is a significant effect of Process and REACH models on forgiveness among adolescents in JHS in Bimbilla.*

This result revealed that the Process model and the REACH model have a direct impact on a person's ability to forgive. This is based on the fact that these models can change attitudes, cognitions and behaviours. This result supports the views of similar studies that "when people forgive, they abandon their negative emotions, thoughts and behaviours toward the transgressor" [6, 28]. Thus, when the participants were exposed to the Process model and the REACH model their unforgiving thoughts such as revengefulness, hatred and anger toward their offenders were changed or shaped into forgiveness tendencies like love, empathy, sympathy and compassion. This result also supports the views of previous studies "that empathy, compassion and humility promote forgiveness" [29, 30]. For instance, the mean score in the control group was less than that of the REACH model and the Process model. The result indicates that the Process model and the REACH model were effective in helping adolescent JHS students in Bimbilla overcome their hurts.

The process model and the REACH model showed a significant improvement in the level of forgiveness among participants. The finding confirms early studies that "clients who have been taken through forgiveness therapies have shown a significant change in forgiveness" [11, 31-34]. In contrast, a writer posits that "the tendency of forgiveness among adolescents who have experienced emotional abuse by parents still have the desire to take revenge on those who have hurt them, even though it is not as high as the desire to avoid or withdraw from those who have hurt them" [35]. This is because they have not been able to control the negative emotions that arise when painful events occur. In adolescents, this is a natural occurrence and it is suggested that adolescents are not able to control their emotions, especially negative ones. This is also by Santrock who states that adolescence is often associated with periods of emotional instability, identity crises, and behavioural problems [36].

Another probable explanation of the effectiveness of the models is that those who facilitated the forgiveness interventions using the Process model and the REACH model were experienced and had adequate training on how to use the therapies. That might have promoted the effectiveness of the interventions leading to a significant improvement in the level of forgiveness among the adolescent students. This confirms previous studies that "therapists who have trained for more than eight hours were more effective in facilitating forgiveness interventions" [37]. The eagerness, enthusiasm, motivation, spending more time expressing empathy, expressing more affect, experiencing group affiliation, social support from group members, punctuality and the direct involvement of the participants in the therapeutic activities could have contributed to this result. The implication of this is that if therapists will ensure the effectiveness of forgiveness interventions, the participants need to be encouraged and motivated to take active roles in the therapeutic activities. Another implication of the finding for counsellors is that in facilitating forgiveness interventions more attention needs to be paid to the affect, behaviour and cognition of clients because forgiveness involves changes in these variables. Furthermore, therapists must ensure that clients develop empathy, compassion, love and humility for their transgressors which are active ingredients or emotional qualities for the forgiveness process.

Hypothesis Two

$H_0$2: There is no significant effect of Process and Reach models on anger among adolescents in JHS in Bimbilla.

H_A2: There is a significant effect of Process and Reach models on anger among adolescents in JHS in Bimbilla.

There exists a positive relationship between forgiveness and anger as a mental health variable [38]. This means that when the forgiveness level is increased, the anger level will be reduced because anger will be indirectly treated. The result of this study indicated that exposure to the REACH model and Process model of forgiveness contributed to a reduction in the level of anger among adolescent JHS students in Bimbilla. During the intervention, participants were encouraged to have empathy, compassion, sympathy and love for their transgressors through role-play and didactics. The participants were also taken through cognitive restructuring exercises to help the participants let go of their unhealthy thoughts toward their offenders such as hatred, revengefulness, avoidance and rage. The participants were also exposed to how to find meaning in suffering. Furthermore, the participants were exposed to the effects of deepening and easing anger on their physical and mental health. Consequently, there was an increase in forgiveness which intends to reduce the level of anger among adolescent JHS students in Bimbilla.

The finding confirms earlier studies that "an improvement in the forgiveness level of participants leads to a significant reduction in anger, stress, state anxiety and depression among clients" [31, 39-41]. This finding also supports the views of other writers that "higher levels of forgiveness are an indication of lower levels of anger, depression and lower anxiety" [42, 43]. On the contrary, this finding contradicts an early study, that "there was no significant difference in the post-test mean score of anger in the experimental groups and post-test mean score of anger in the control group" [11]. This means an improvement in the forgiveness levels of adolescent JHS students in Bimbilla has not yielded any significant effect on anger.

In addition, previous studies indicated that "no significant treatment effects were found concerning measures of hope, depression, religious well-being, anxiety and hostility" [16, 33]. This indicates that a significant improvement in forgiveness cannot result in an improvement in mental health. Furthermore, the finding contradicts other

studies that "there is no significant association among gratitude, forgiveness, subjective well-being, anger and crime" [44, 45]. The current result also supports the views of other writers "that forgiveness interventions reduce negative thoughts and feelings towards the target of transgression as well as increasing positive thoughts and feelings toward the transgressor" [28, 46]. In addition, the result is consistent with Enright and Human Development Study Group that "receiving forgiveness occurs when an individual has offended another, and then the offended person willingly offers the cessation of negative attitudes, thoughts and behaviours and substitute more positive feelings, thoughts and behaviours toward the offender" [47]. This might have contributed to the significant effect that the therapies had on anger. This study implies that counsellors need to be aware that forgiveness interventions have the same level of potency in treating anger and other psychological problems like depression, anxiety, self-esteem and guilt. Another implication for counsellors is that, in trying to treat anger they should take note of the affective, cognitive and behavioural components of the clients. In addition, anger can be treated indirectly using forgiveness interventions not only through anger management techniques.

Hypothesis Three

$H_0$3: There is no significant effect of Process and Reach models on depression among adolescents in JHS in Bimbilla.

H_A3: There is a significant effect of Process and Reach models on depression among adolescents in JHS in Bimbilla.

The outcome of the analysis of this study revealed that both the REACH model and Process model were effective in reducing levels of depression among JHS students in Bimbilla. Throughout the intervention period, the participants were stimulated to have empathy, compassion, sympathy and love for their offenders through the various activities such as role-play and discussions that were carried out. The result suggests that forgiveness is a significant protective factor against depression for adolescents, helping them to effectively control and manage anger, thus fostering emotional health. An important clinical implication of this study regards the potential of forgiveness as a resource for well-being in therapy: among the various possible protective factors in adolescence, forgiveness has the added advantage that it can be fostered in clinical settings, and working on forgiveness in psychotherapy or counselling could decrease adolescent depression and improve well-being.

A similar study supported the findings that "forgiving others protects people against the negative effect of anger, hatred and revenge and prevents them from becoming depressed" [13]. Higher forgivingness is associated with lower levels of depression across all ages, and with higher levels of well-being [13, 49]. Based on the models used in this study, "the adolescents were taken through cognitive restructuring exercise to help the participants let go their unhealthy thoughts such as hatred, revengefulness, avoidance and rage toward their transgressors" [10, 50]. Notwithstanding that, the participants were furthermore exposed to the various ways to find meaning in suffering. Additionally, the participants were made aware of the consequence of deepening and letting go of their physical and mental health. Therefore, the forgiveness level of participants was increased leading to reduced levels of depression in adolescent JHS students in Bimbilla.

It was also found that the participants who were exposed to the two therapies (Process and REACH models) demonstrated a significant decrease in depression levels. Thus, these participants had significant reduction levels of depression. The result supports what other writers said: "Higher levels of forgiveness predict better mental and physical health, which includes lower levels of anxiety, anger, stress and, depression" [38,

51]. In addition, the result of this study is consistent with earlier studies that "forgiving others protects people against the negative effect of anger, hatred and revenge and prevents them from becoming depressed" [48, 52]. Again, this finding supports a previous study that "forgiving attitudes tend to precede decreased anxiety and depression and that whenever victims forgive their offenders, they experience reduced mental health problems" [52]. The result is however, inconsistent with previous studies "that the tendency to forgive is negatively related to depression" [53, 54]. Forgiveness is inversely related to depression and directly related to Hedonic Balance (HB) [7]. Yet again the result is not consistent with similar findings that "forgiveness and depression are negatively related" [16]. This finding offers several counselling implications for the well-being of adolescent JHS students in Bimbilla. Thus, counsellors need to organise school-based programs on forgiveness which could promote a more benevolent attitude in confronting slights and interpersonal ruptures, thereby preventing depression and increasing well-being. Again, counsellors need to be conscious of the fact that both forgiveness interventions have the same level of effectiveness in treating depression and other psychological problems like anxiety, self-esteem and guilt. Also, counsellors need to understand that depression can be treated indirectly using forgiveness interventions. Finally, adolescent students can make use of forgiveness interventions involving either the process model or the REACH model as a way of treating their depression.

Although the two therapies were found to be efficacious in reducing depression levels of students, the result revealed that none of them were found to be more effective than the other. That is to say that the REACH model and the Process model had similar levels of effectiveness in reducing depression among JHS students in Bimbilla.

Research Question 1

This research question sought to qualitatively examine the effect of the interventions on forgiveness, anger and depression among adolescent JHS students who experienced hurt in Bimbilla. Specifically, the qualitative results of this research question were compared with the findings from hypotheses one, two and three. Participants interviewed after the intervention indicated that positive thoughts towards the offender and positive feelings towards the offender were the effects of the intervention on them. This confirms the results found in the quantitative study. Almost all the participants described their thoughts about the offender as positive and refreshing after the intervention.

The responses of the participants revealed that they had a more positive feeling toward the offender. The participants opined that their feelings about the offender had changed and were willing to see things from the view of the offender.

The information gained through the intervention that the process of forgiveness not only reduces the emotional distress associated with past hurts and offences but also enhances contentment and satisfaction in letting things go could be used to enhance optimal functioning in an individual. The participants spoke about how their interaction with the researcher and the interventions has influenced their perception about holding on to offences and not forgiving the offender. The participants explained that they have realised that there is no need to hold on to unforgiveness which has made them hate and hurt themselves severally. Adolescents may best respond to a discussion that focuses on the social benefits of forgiving and the principles that underlie forgiveness such as compassion and empathy [55]. It is important to allow adolescents to express the negative emotions related to being hurt. Expression of all emotions can help adolescents with identity development as they process their pain and realize they can cope with the hurt. Like adults, children and adolescents learn more deeply when challenged and encouraged. We must talk to adolescents about forgiveness so that they know it is an option [55]. One way we can do this is by weaving forgiveness into discussions about current events and happenings in the world [56]. It is important to make the topic real for adolescents so that they can see the advantages of forgiveness and releasing anger.

5. Conclusions and Recommendations

The study indicates that both the REACH model and PROCESS model have the efficacy in enhancing forgiveness among adolescents. The study also revealed that the REACH model and Process model have efficacy in reducing levels of depression among adolescent students. It is recommended that Counselling Centres should be set up by District Education Offices and the District Assemblies in the community so that students can visit the centre anytime they feel hurt. Regular seminars, lectures and symposia should be organized regularly by Counsellors and Psychologists using the efficacy of forgiveness therapies (Process and REACH Therapies) for students to be sensitized on the need to patronise forgiveness interventions. It is also recommended that the Government should provide adequate funds and support to encourage the conduct of research in forgiveness counselling since it is a new concept in Africa and Ghana in particular.

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