Clinical Trial/Experimental Study

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Efficacy of rational emotive digital storytelling intervention on knowledge and risk perception of HIV/AIDS among schoolchildren in Nigeria

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Abstract

Background: This investigation was aimed at determining the efficacy of a rational emotive digital storytelling (REDStory) therapy on knowledge and perception of risk of HIV/AIDS among schoolchildren in Enugu State, Nigeria.

Methods: The researchers adopted a group randomized controlled trial design involving a pretest, posttest, and follow-up design involving a treatment group and a waiting-list control group. Participants were 80 junior secondary schoolchildren attending public and private schools who met the criteria for inclusion in the sample of this study. The REDStory intervention program lasted for 8-week duration of REDStory therapy. The HIV Knowledge Questionnaire and the Perceived Risk of HIV Scale (PRHS) were used for data collection for this study. Repeated measures analysis of variance and *t* test were used for data analysis.

Results: The results revealed that REDStory therapy had a significant effect in increasing knowledge level and perceived risk of HIV among schoolchildren compared to those in waitlisted control group. Lastly, the positive benefits of this study were significantly sustained by the treatment group at the follow-up.

Conclusion: The current study therefore suggests the use of REDStory therapy in increasing knowledge and perception of risk of HIV/AIDS among schoolchildren in Enugu, Nigeria.

Abbreviations: AIDS = acquired immune deficiency syndrome, HIV = human imumodeficiency virus, HIV-KQ-18 = HIV Knowledge Questionnaire, PRHS = Perceived Risk of HIV Scale, REBT = rational emotive behavior therapy.

Keywords: digital storytelling, HIV knowledge, HIV Risk Perception, HIV/AIDS, REBT, schoolchildren, social media

1. Introduction

Today, many schoolchildren in developing countries such as Nigeria are exposed to the risk of human imumodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) from various sources, which remain unknown to them. The HIV/AIDS epidemic is a menace to children in that it violates their basic human rights. This epidemic also prevents children from having their needs met, as it touches on virtually every aspect of their life. It tends to be the poorest and the least empowered individuals who are the most affected, including children living in poverty, those living with a disability, and young girls.[1] In this study, the researchers adopted the United Nations Convention on the Rights of the Child's (UNCRC) definition of children as every human being under the age of 18 years.[2]

According to the report from UNAIDS,[3] there was 58% global reduction in the number of new HIV infections among children between 2002 and 2013. However, this progress still leaves much to be desired as millions of children annually are being affected directly or indirectly by the impact of the HIV epidemic on their families and communities. Children are affected by HIV/AIDS through infection or the loss of a parent; many experience a premature end to their childhood as they are required to become heads of households, raise younger siblings, drop out of school, work for money, and care for parents and other family members with HIV-related sickness.[4] These children also experience greater poverty as a result of the loss due to AIDS of adult wage earners, farmers, and other skilled and contributing household members. Without adequate care and support, children experience losses in health, nutrition, education, affection, security, protection, and vulnerability to rejection, discrimination, fear, loneliness, and depression. These losses affect all of the children in a household. Where infection rates are high, entire communities are affected.[4]

Several studies in Nigeria have revealed the existence of a high level of misconception and low knowledge about HIV/AIDS among schoolchildren.[5–11] Some of the studies have demonstrated that the mass media was the children's major source of

Editor: Massimo Tusconi.

The authors report no conflicts of interest

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Medicine (2018) 97:47(e12910)

Received: 13 August 2018 / Accepted: 27 September 2018

http://dx.doi.org/10.1097/MD.0000000000012910

information about HIV with doubtful effectiveness evidenced by erroneous beliefs.[8,9] Thus, it seems that even though the media is a source of information about the virus, it has not be effectively used to promote an in-depth knowledge of the disease on part of Nigerian children in spite of the evidence[9,11] that children's awareness about the virus is high in Nigeria. Some findings support the possibility that improving knowledge about HIV transmission among schoolchildren would result in greater and general knowledge about HIV/AIDS and the children being more tolerance toward students with HIV infection and exhibiting less high risk behavior.[12,13]

Furthermore, it has been determined that early sexual debut, a risk factor for HIV transmission that is common in Nigeria, begins at less than 15 years of age for 15% of the nation's children.[14,15] This is one of the most common factors that increases HIV vulnerability among the schoolchildren, along with very low HIV testing rates as only 17% of the children could attest to knowing their HIV status.[14,15] Research has also indicated that about 400,000 children in Nigeria are living with HIV.[16] The HIV epidemic has had an indirect impact on Nigerian children, as they become the caregivers for parents who are living with HIV. This responsibility often lies more with the girls more than boys.[17] This discrepancy seems to reflect an imbalance in schooling between the male and female genders in Nigeria, with girls being absent in HIV education classes that could teach them how to protect themselves from HIV infection. It has also been revealed that about 2 million children in Nigeria were orphaned by AIDS, with many acting as the caretakers for siblings or being looked after by grandparents.[16]

In response to this tragic state of affairs created by the HIV/AIDS epidemic, the Nigerian National HIV/AIDS Strategic Plan 2010 to 2015 called for enhanced behavior change communication for key affected populations. In this regard, peer education systems are now being scaled-up, along with social media messaging, which aims to reach those populations who are not able to take advantage of HIV services[17] such as voluntary testing and counseling. A comprehensive knowledge improvement about HIV/AIDS for schoolchildren might be achievable through their exposure to a REDStory intervention.

1.1. Rational emotive digital storytelling intervention

The REDStory intervention is an adaptation from the rational emotive behavior therapy (REBT), which was propounded in 1955 by Albert Ellis.[18] The REDStory therapy combined rational-emotive education, which is based on the principles and practice of REBT theory, with HIV/AIDS audio-visual resources from social media platforms such as YouTube and Facebook to provide relevant digital stories, along with mental health lessons about HIV/AIDS transmission and its signs and symptoms, prevention, and management strategies. The aim was to help schoolchildren increase their knowledge about the virus; learn about other people's lived experiences related to HIV; and to overcome anxiety about peer pressure and sexual concerns in that such anxiety could hinder the acquisition and retention of information about AIDS prevention thereby preventing schoolchildren from planning for the consequences of engaging in high risk behaviors such as sexual contact and drug use.[12]

Given that reducing or eliminating high risk behaviors is one of the most feasible ways to limit further spread of HIV, the REDStory intervention is designed as a cognitive-behavioral, psycho-educational model of risk behavior reduction to change those factors, which can lead to high risk behaviors associated with HIV/AIDS transmission. Like the AIDS Risk Reduction Model,[19] the REDStory intervention recognizes that people's thinking, feelings, and behaviors, which manifest in their day-to-day activities, make them vulnerable to contracting HIV/AIDS. Thus, making the decision to alter HIV risk behaviors and committing to that decision requires cognitive restructuring and re-education. This choice also requires overcoming barriers to enacting the decision, including problems in sexual communication and seeking help to gain knowledge of strategies to reduce risk behaviors.

The delivery of the rational-emotive digital storytelling intervention for Nigerian schoolchildren is also informed by the notion that HIV prevention efforts could be most effective if its prevention programs utilize strategies, which combines cognitive and behavioral skills training.[19] To date, the objective of this study was to examine the efficacy of a rational-emotive digital storytelling intervention on knowledge and perception of risk of HIV/AIDS among schoolchildren in Enugu State, Nigeria. To guide the study, the researchers hypothesized that rational-emotive digital storytelling intervention would lead to an increase in knowledge and risk perception of HIV/AIDS among the schoolchildren exposed to a REDStory intervention in comparison to a waiting-list control group.

2. Method

2.1. Compliance with ethical standards

The ethical approval to conduct this research was obtained from the Research Grants/Ethics Committee, Faculty of Education, University of Nigeria, Nsukka. Parents of the participating schoolchildren as well as school heads provided informed consent in writing. The schoolchildren also provided assent. The study complied with the research ethics of the American Psychological Association (APA), as well as the Declaration of Helsinki.

2.2. Participants

The participants in this study were 80 junior secondary schoolchildren, attending public and private schools in Enugu State, Nigeria (see Fig. 1). Participants were recruited during school assemblies and classroom visits between October 2017 and March 2018 by the authors. The GPower 3.1 software was used to ascertain the adequacy of the sample size.[20] Per inclusion criteria, the selection of participants was based on whether they had access to social media platforms or not. Only schoolchildren who self-reported to have access to social media platforms were selected and included in the sample. Note that actions, beliefs, behavioral intentions, perceptions, and retrospective information can be measured through self-reports.[21] The selection of participants was also based on their availability throughout the period of the study. Table 1 shows the characteristics of the participants.

2.3. Measures

2.3.1. HIV Knowledge Questionnaire (HIV-KQ-18). The HIV-KQ-18 is an 18-item self-administered questionnaire developed by Carey and Schroder to measure individual's HIV-related knowledge.[22] It is scored on 3-choice statements, namely true, false, or do not know. The HIV-KQ-18 yields a single score, with higher scores reflecting greater HIV-related knowledge. The HIV-KQ-18 has been found to have good reliability and validity.[22] In this study, the HIV-KQ-18 has Cronbach alpha internal reliability coefficient of 0.87.

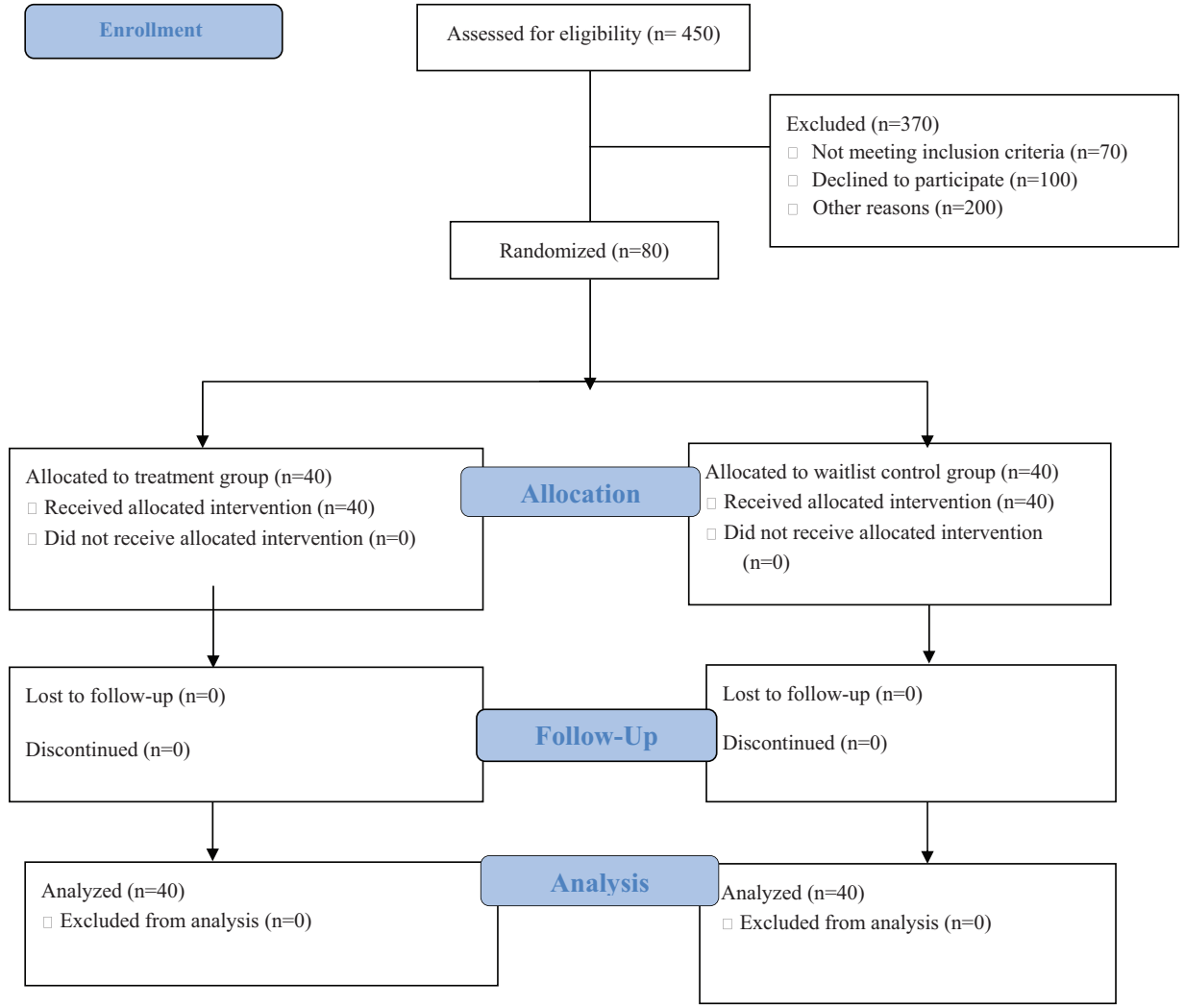

Figure 1. Participant eligibility flowchart.

2.3.2. Perceived Risk of HIV Scale (PRHS). The PRHS created by Napper, Fisher, and Reynolds is an 8-item self-report questionnaire, which includes items measuring cognitive assessments of risk, intuitive assessments, and salience of risk.[23] The PRHS provides an inclusive assessment of perceived risk of HIV infection compared to many existing scales for assessing HIV risk perception. The PRHS is rated on a 5-point scale of varying responses and is usually summed up to yield an overall PRHS

Table 1

Demographic characteristics of the participants.

Characteristic	Treatment group, N (%)	Control group, N (%)	*T*	Significance
Age	14.63±1.23	14.93±.83	−1.277	.201
			χ^2	
Gender			.201	.823
Male	20 (25%)	22 (27.5%)		
Female	20 (25%)	18 (22.5%)		
School type			.205	.821
Private	18 (22.5%)	13 (16.25%)		
Public	22 (27.5%)	27 (33.75%)		
Location			1.317	.359
Urban	18 (22.5%)	13 (16.25%)		
Rural	22 (27.5%)	27 (33.75%)		
Class level			5.250	.072
JSS1	6 (7.5%)	10 (12.5%)		
JSS2	13 (16.25)	19 (23.75%)		
JSS3	21 (26.25%)	11 (13.75%)		

χ^2 = chi-square, mean age of participants in years, *t* test results for age.

score. In PRHS, higher scores indicate greater risk perception. The PRHS has been found to have accurate reliability and validity.[23] In this study, the PRHS has Cronbach alpha internal reliability coefficient of 0.84.

2.3.3. Demographic questionnaire (DQ). The DQ is a 5-item information sheet assessing participants' demographic characteristics, which included age, gender, school type, location, and class level.

2.4. Intervention

2.4.1. REDStory Intervention. The REDStory intervention is an 8-week, twice per week, rational-emotive psychoeducational audio-visual intervention on HIV/AIDS. This digital storytelling model of health promotion and disease prevention was designed to help children learn from and about other people's lived experiences related to HIV/AIDS. One of its objectives was also to help schoolchildren gain basic knowledge about HIV/AIDS (signs, symptoms, stages, mode of transmission, and preventive measures), as well as improve their perceived risk of HIV through a digital story-informed rational-emotive group psycho-educational approach.

Participants were invited to watch HIV/AIDS videos during group meetings and individually at their respective homes. The videos could be downloaded from social media sites. The participants attended sessions with the HIV video given to them to watch at home; wrote down the key messages gained from watching the video; and told the story of the moral lessons they learned from it to other group members during each session. After sharing the story captured in the video they watched at home, each participant asked group members to state the moral and health lessons they learned. They were given 5 minutes each to share these lessons.

Group members responded to questions and made contributions to the HIV/AIDS video stories narrated by each member with the aid of an activity called "pick a card, any card," which provided the opportunity for each member to take turns during sessions. After each participant narrated an HIV/AIDS video story they viewed, and question and answer attended to, the researchers engaged the participants in small group psycho-educational discussions (6 children per group) led by 1 therapist each to explore their knowledge and perceived risks of HIV/AIDS. A series of rational, emotive, and behavioral techniques of REBT were employed by the researchers over the course of the REDStory intervention, including cognitive disputation; behavioral, cognitive, and emotive homework assignments; and direct teaching to dispel myths about HIV/AIDS and promote basic facts about the virus.

2.5. Procedure

This study adopted a group randomized controlled trial design,[24] which involved a pretest, posttest, and follow-up evaluation. The intervention type consisted of an experimental group (REBC group) and a control group (no-intervention control group). The study participants were randomly assigned to either no-intervention group or experimental group by 3 of the researchers.

A total of 40 participants were exposed to each intervention type. The experimental group participants were exposed to the digital story intervention. The control group participants used for comparison were not exposed to any intervention. Allocation sequence was generated, using simple randomization based on a randomization table created using a computer software program.[25] Outcome assessors (the data analysts) and participants were blinded to the allocation sequence as in previous studies.[26,27] Using sealed opaque envelopes, the allocation sequence was also concealed from those who assigned the study participants to each intervention type. The participants completed and returned the outcome measures at various time points.

2.6. Data analyses

The data collected was analyzed using a 2×3 ANOVA with repeated measures, and we reported the partial eta squared (η_p^2) and adjusted R^2 (ΔR^2) as effect size of the REDStory intervention. We reported the confidence intervals (CIs) of the intervention results. In the statistical analysis, time points were entered as within-subjects variables, but group was entered as between-subjects factors. Chi-square (χ^2) and t test analyses were carried out to evaluate participants' demographic variables. All results were regarded as significant at $P \leq .05$. All results were regarded as significant at $P \leq .05$.

The test for assumptions violation revealed that the Mauchly test of sphericity was not significant (Mauchly $W = 0.875$, $P = .217$). In essence, the sphericity assumption was met. In addition, the test for data normality via the Shapiro–Wilk test of normality was not significant for both intervention arms: treatment group (Shapiro–Wilk $= 0.859$, $P = .122$) and waiting-list group (Shapiro–Wilk $= 0.864$, $P = .321$). This showed that the data was normally distributed. No outliers and no missing values were found in the data across the groups. All data collected were entered and statistically analyzed via IBM SPSS, version 22.

3. Results

Table 1 shows that the mean age of schoolchildren who participated in the treatment group was 14.63 ± 1.23 years, while that of those in control group was 14.93 ± 0.83 years, with no statistically significant difference, $t(78) = -1.277$, $P = .206$, 95%CI $= -0.76785, 0.16785$. Among the 80 schoolchildren, 20 (25%) male and 20 (25%) female participants were in the treatment group, while the control group was comprised of 22 (27.5%) males and 18 (22.5%) female participants, with no statistically significant difference, $\chi^2(1) = 0.201$, $P = .823$. Results also revealed that 18 (22.5%) of the participants in the treatment group and 13 (16.25%) in the control group were drawn from private schools, while 22 (27.5%) participants in the treatment group and 27 (33.75%) in the control group were drawn from public schools, with no significant difference, $\chi^2(1) = 0.205$, $P = .821$. The participants also comprised 18 (22.5%) from urban area and 13 (16.25%) from rural area in the treatment group, while 22 (27.5%) in the control group were from urban area and 27 (33.9%) from rural area; there was also no statistically significant difference, $\chi^2(1) = 1.317$, $P = .359$. In addition, 6 (7.5%) JSS1 students, 13 (16.25%) JSS2 students, and 21 (26.25%) from JSS3 were in the treatment group, while 10 (12.5%) from JSS1, 19(23.75%) from JSS2, and 11(13.75%) from JSS3 were in the control group, with no statistically significant difference, $\chi^2(1) = 5.250$, $P = .072$.

Table 2 shows the results of a 3-time assessment of schoolchildren on HIV knowledge and perceived risk of HIV, using the HIV-KQ-18 and Perceived Risk of HIV Scale (PRHS), respectively. Table 2 indicates that there was no significant difference between the treatment and waiting-list control groups in initial HIV knowledge, which was measured using HIV-KQ-18, with F

Table 2

Repeated-measures ANOVA showing the effect of REDStory intervention program on schoolchildren's HIV knowledge and perceived risk of HIV based on time and group.

Time	Measures	Group	Mean (SD)	F	Sig.	η_p^2	ΔR^2	95% CI
1 (Pretreatment)	HIV-KQ-18	Treatment	5.00 (2.53)	0.044	.835	0.056	0.015	4.190–5.809
		Control	4.88 (2.81)					3.975–5.774
	PRHS	Treatment	28.95 (6.98)	155.773	.173	0.044	−0.024	26.716–31.183
		Control	14.85 (1.51)					14.366–15.333
2 (Post-treatment)	HIV-KQ-18	Treatment	32.05 (1.99)	949.014	.000	0.563	0.562	31.414–32.685
		Control	6.40 (4.88)					4.840–7.959
	PRHS	Treatment	14.33 (1.72)	1011.016	.000	0.898	0.897	13.776–29.088
		Control	14.28 (1.81)					13.695–15.826
3 (Follow-up)	HIV-KQ-18	Treatment	32.50 (2.26)	1057.481	.000	0.476	0.475	31.775–33.224
		Control	7.350 (4.34)					5.963–8.736
	PRHS	Treatment	28.43 (2.07)	831.065	.000	0.621	0.621	27.761–29.088
		Control	15.18 (2.04)					14.523–15.826

η_p^2, partial eta squared; ΔR^2 = adjusted R^2; F, value from ANOVA test. CI = confidence interval, degree of freedom (1,78), HIV-KQ-18 = HIV Knowledge Questionnaire, Mean (SD) = mean (standard deviation), PRHS = Perceived Risk of HIV Scale, Sig. = significance.

(1,78) = 0.44, $P = .835$, $\eta_p^2 = 0.056$, $\Delta R^2 = 0.015$. The measure after the REDStory intervention program showed a significant improvement among schoolchildren in the treatment group when compared to their counterparts in the waiting-list control group, F(1,78) = 949.014, $P = .000$, $\eta_p^2 = 0.563$, $\Delta R^2 = 0.562$. Similarly, the follow-up measure (time 3) showed that there was a significant increase in the HIV knowledge among schoolchildren in the treatment group than those in the waiting-list control group, F(1,78) = 1057.481, $P = .000$, $\eta_p^2 = 0.476$, $\Delta R^2 = 0.475$. This finding therefore implied that the REDStory intervention program was effective in increasing the level of HIV knowledge among schoolchildren.

In addition, Table 2 showed that there was no significant difference between the treatment and waiting-list control groups of perceived risk of HIV before the treatment, F (1,78) = 155.773, $P = .173$, $\eta_p^2 = 0.044$, $\Delta R^2 = -0.024$, as measured using the PRHS. The second measure (time 2) after the REDStory intervention program showed a significant difference in the perceived risk of HIV among schoolchildren in the treatment group when with those in the waiting-list control group, F(1,78) = 831.065, $P = .000$, $\eta_p^2 = 0.621$, $\Delta R^2 = 0.621$. Furthermore, the follow-up measure (time 3) showed that there was a significant improvement in the perceived risk of HIV among schoolchildren in the treatment group, compared to their counterparts in the waiting-list control group, F(1,52) = 1011.016, $P = .000$, $\eta_p^2 = 0.898$, $\Delta R^2 = 0.897$. This finding implied that the REDStory intervention program was efficacious in increasing schoolchildren's perceived risk of HIV. Figures 2 and 3 show a graphical presentation of the time × group interaction effects.

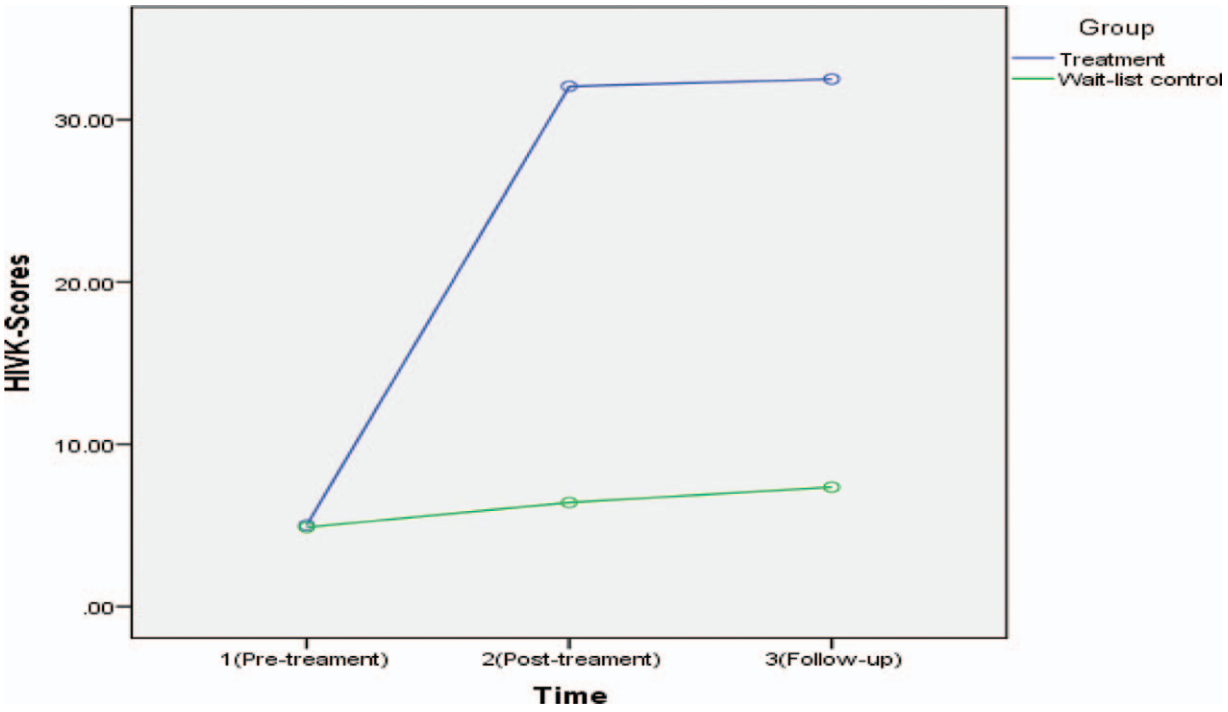

Figure 2. Graphical presentation of time × group interaction effect.

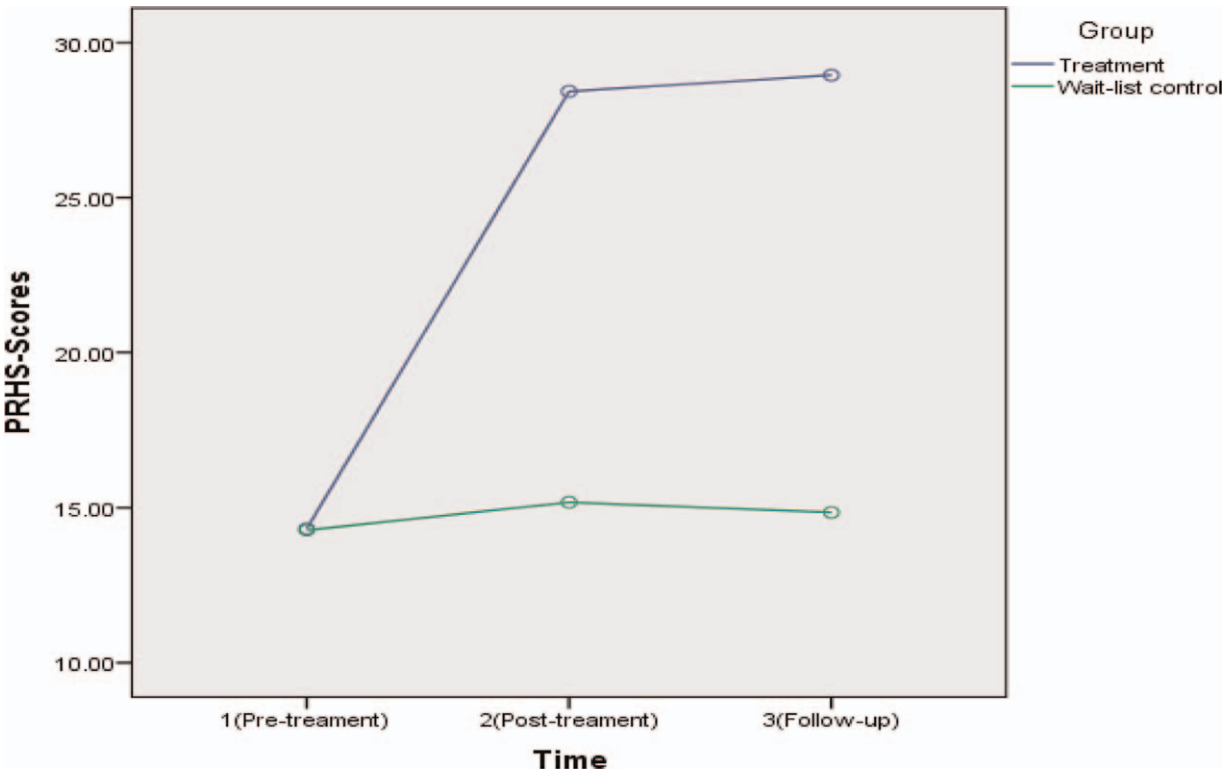

Figure 3. Graphical presentation of time × group interaction effect.

4. Discussion

This study showed that REDStory intervention is effective for increasing the knowledge and perceived risk of HIV/AIDS among schoolchildren in Enugu State, Nigeria. In line with the findings, Surilena et al found that REBT significantly improved mental health of individuals.[28] Earlier, Development Services Group suggested the use of promising psychotherapeutic interventions for enriching knowledge, attitudes, and behaviors of individuals with regard to the cause and ways of transmitting HIV/AIDS.[29] Onyechi et al showed that a group REBT program was significantly effective in improving HIV risk perceptions of students.[30]

Rational-emotive behavioral intervention could improve and demonstrate a modification of poor knowledge of risk associated with HIV. Using an REBT-based program, Surilena et al noted that people who comply with treatment intervention gained a better understanding of HIV/AIDS and feel better compare to those who did not receive treatment.[28] According to the authors, when people have reliable knowledge about the infectivity rate of HIV/AIDS and possible treatments, they are more likely to comply with HIV-related treatment and management practices when the need arises.[28] Thus, a good knowledge about the disease and its management can encourage clients to have positive attitudes toward treatment and medication. Likewise, school-children who gain a firm grasp of the causes and ways of contracting HIV/AIDS and its management, treatment, and medication may perceive HIV infected patients positively.

In addition, Bamise et al found that social media was major source of information in changing dysfunctional beliefs about HIV/AIDS.[8] Research also agreed that social media is a significant source of education for children since a high proportion of the youth population are active users.[31] There is advocacy for improved use of public media with evidence-based therapeutic approach, which could alter the misconception of schoolchildren toward HIV/AIDS.[8] This is because adequate awareness of HIV control measure is likely to promote its usage among adolescents.[32]

Psychotherapeutic storytelling interventions can help change erroneous feelings and beliefs of children with HIV patients and also improve the lives of the patients.[33] A digital storytelling film was shown to be significantly effective in changing dysfunctional beliefs that preoccupied individual's thoughts to a better and comfortable perspective of life.[33] Similarly, Cueva et al found that digital video stories promoted the knowledge of cancer among people.[34] In the same vein, Wieland et al revealed that digital stories motivated a high number of participants to engage in better disease management behaviors.[35] Furthermore, Balmer et al showed that the use of storytelling could increase self-knowledge in declining sexual advances.[36]

Nelson et al found that storytelling strengthened pro-social attitudes and behavior of increased awareness about HIV avoidance.[37] In addition, Nelson et al indicated that participants who were exposed to HIV-related story condition maintained an increase in their knowledge about HIV prevention.[38] Likewise, Gucciardi et al reported that the use of storytelling was an innovative intervention with the ability of providing individuals with greater knowledge about their health.[39]

4.1. Implications for practice

Therapists' commitment to change and modify dysfunctional belief and increase people's knowledge of HIV/AIDS can transform the lives of many individuals, including schoolchildren, in developing countries. It is therefore relevant for health policy to strengthen the need for effective therapeutic interventions,

which can foster knowledge and improve risk perception about HIV. This study has shown that REBT interventions can improve schoolchildren's knowledge about HIV. It is suggested that clinicians, therapists, and rational emotive behavioral practitioners assess predictors of poor knowledge about HIV among schoolchildren. The findings of our study should also serve as a stepping stone for helping professionals to conduct future research that focuses on transforming HIV-related erroneous thoughts and feelings through storytelling interventions integrated into an REBT program.

4.2. Limitations

There were limitations in this. The authors recognize that the sample size included only junior secondary schoolchildren attending public and private schools in Enugu State, Nigeria. For this reason, the present study can be considered a beginning foundation for further studies. It is recommended that future studies attempt to expand to include all secondary schoolchildren in South-East Nigeria for possible generalization of findings to all secondary schoolchildren in the zone. Moreover, the efficacy of the REDStory therapy for this study was assessed using instruments, which generated mainly quantitative data. Future studies should involve the collection of qualitative data through interviews, observation, and the students' opinions in order to complement the findings based on quantitative data. Furthermore, despite the fact that a follow-up assessment was conducted in this study, proper consideration for the long-term effect of REDStory therapy may be required. Consequently, the researchers are of the opinion that it would be useful for future research to focus on conducting multiple checks with respect to long-term follow-up assessments in order to determine the possibility of maintaining an increase in the knowledge level and perceived risk of HIV among schoolchildren through a REDStory intervention program. Subsequent studies should also give consideration to the moderating effects of some socio-demographic variables, for example, participants' religion, gender, location, and socio-economic status among others.

Although participants who were subjected to a REDStory were more advantaged, this was clearly not the situation for the waiting-list control group. Thus, future research should provide participants in the control condition with the chance of having informal discussions before being waitlisted. Another limitation of this study was the fact that participants in the waiting-list control group completed the questionnaires only during pretest and posttest assessments. In this case, lack of follow-up assessments for the waiting-list control group participants limited the findings for this study. Therefore, subsequent researchers should make it an objective to ensure that follow-up assessments are conducted in order to generate data necessary for drawing reasonable conclusions. Notwithstanding, it is possible that this method of assessment of the participants in the control group can be successfully applied to determine the efficacy of a REDStory intervention program.

5. Conclusion

The focus of this study was to examine the efficacy of a REDStory therapy on knowledge and perception of risk of HIV/AIDS among schoolchildren in Enugu State, Nigeria. The study showed that REDStory therapy was effective for increasing knowledge level and perceived risk of contracting HIV among schoolchildren. Based on the findings of this study, the researchers concluded that the REDStory therapy had a significant effect in increasing the knowledge level and perceived risk of HIV among schoolchildren compared to those in the waitlisted control group. The researchers recommend the use of REDStory therapy in order to increase knowledge and perception of risk of HIV/AIDS among schoolchildren. Lastly, counselors and other social workers with adequate knowledge of a rational-emotive behavior therapy framework are encouraged to use this approach in helping schoolchildren with respect to knowledge and perception of risk of contracting the virus.

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