





































Table 1 indicates that the students treated with aversion therapy had pretest mean score of 57.03 and posttest mean score of 35.94 with lost mean 21.09 in their attitude towards cigarette smoking, while the students placed under the control who received conventional group counselling had pretest mean score of 59.77 and posttest mean score of 53.90 with lost mean 5.87 in their cigarette smoking attitudes.

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### Testing the Null Hypotheses

#### Hypothesis 1

There is no significant difference in the Posttest mean scores of students' attitude towards cigarette smoking after being treated with aversion therapy and those in the conventional counselling control group.

**Table 4:**  
**ANCOVA on the posttest mean scores of cigarette smoking attitude of students treated with aversion therapy and those who received conventional group counselling**

Source of variation	SS	df	MS	Cal. F	Crit. F	Remark
Corrected Model	6350.528	2	3175.64			
Intercept	106.500	1	106.500			
Pretest	1354.635	1	1354.635			
Treatment models	4002.196	1	4002.196	338.32	4.00	S
Error	697.940	59	11.829			
Total	130537.000	62				
Corrected Total	7048.468	61				

In Table 4, it was observed that at 0.05 level of significance, 1 df numerator and 59df denominator, the calculated F 159.06 is greater than the critical F 4.00. Therefore, the first null

hypothesis is rejected. So, there is significant difference in the cigarette smoking attitude posttest mean scores of students treated with aversion therapy and those in the control group.

## **Discussion of the Findings**

### **Aversion and Cigarette Smoking**

Findings from the data analyzed in this study showed that aversion therapy is ineffective in modifying students' attitude towards cigarette smoking. Specifically findings indicated that the students in experimental group 1 possessed positive attitude towards cigarette smoking before the commencement of the study as shown by their scores on the pretest. The findings also indicated that the positive attitude towards cigarette smoking was not modified after being treated with aversion therapy as shown by their scores on the post-test. This indicates that aversion therapy is ineffective in modifying positive attitude towards cigarette smoking.

This finding is in consonance with that of Hajek and Stead (2011) which reported that aversion methods were not shown to be effective in modifying positive cigarette smoking attitude. However, the finding does not reflect position of Frawley and Smith (2010) that aversion therapy was effective in the modification of positive cigarette smoking attitude.

Furthermore, findings of this study revealed a significant difference in the cigarette smoking attitude posttest mean scores of students treated with aversion therapy and those in the control group. This finding is in consonance with that of Herman (2007) which reported that aversion therapy had a significant difference in modifying students' attitude towards cigarette smoking. However, the finding is at variance with that of Hajek and Stead (2011) who reported that aversive methods did not differ significantly from control procedures.

## Recommendations

Based on the findings of this study, the following recommendations are made:

1. Aversion therapy should not be adopted by counsellors as an effective treatment for modifying cigarette smoking attitude of secondary school students in Anambra state.
2. Counsellors, psychologists and teachers and other helping professionals should endeavour to attend conferences, workshops and be acquainted with current and relevant literatures. More research should be intensified in order to proffer solution to the high rate of cigarette smoking in our entire tertiary institutions.

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## REFERENCES

- Abdullahi, A. S. (2013). An Evaluation of the Causes and Effects of Smoking among Muslim Youths in Keffi Local Government Area, Nasarawa State, Nigeria: Islamic Perspective. *Research on Humanities and Social Sciences*, 3(4), 1-7.
- Abdulahi, M.I., Oliagba, O., Sani, S., Umma, A. & Yunusa, U. (2014). The effect of cognitive restructuring intervention on tobacco smoking among adolescents in senior secondary school, in Zaria Kaduna State, Nigeria. *European Scientific Journal*, 11(5), 327-336.
- Abikoye, G.E., & Fusigboye, A. (2010). Gender, locus of control and undergraduate students' smoking habit: *African Journal Drug Alcohol Std.* 9(2), 71 - 80.
- Adeusi, S.O. (2012). Efficacy of cognitive restructuring and behavioural rehearsal on conduct disorder in adolescents in special correctional centres in lagos state. *Published Ph.D Dissertation*. Department of Psychology, Covenant University, Ota.
- Adeyeye, O.O. (2011). Cigarette smoking habits among senior secondary school students in Lagos, south west Nigeria. *International Journal Biological Medical Research*, 2(4), 1047 – 1050.
- American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: American Psychiatric Association.
- Bandura, A. (2006). Toward a psychology of human agency. Perspectives on attitude expression. *Journal of Experimental Social Psychology*, 66. 805 - 820
- Beek, A.T. (2005) The current state of cognitive therapy: 40 years retrospective. *Arch Gen Psychiatry*, 62(9), 953.
- Behrman, W. (2000): Nelson Textbook of Pediatrics, Sixteenth Edition. Germany: W.B. Saunders Company.
- Brain, L.S. (2006). Managing stress: Principles and strategies for health and well-being (5<sup>th</sup> ed.). South Africa: Jones and Bartlett Publishers.
- Carter, B.D., Abnet, C.C., Feskanich, D., Freedman, N.D., Hartge, P., & Lewis, C.E. (2015). Smoking and Mortality — Beyond Established Causes. *N. Engl. J. Med.* 372(7): 631- 644
- Caumo, W. (2001). Risk factors for preoperative anxiety in adults. *Acta Anaesthesiologica Scandinavica*, 45(3), 298 – 307.
- Colman, A.M. (2003). Oxford Dictionary. New York: Oxford University Press.
- Cotran, R. (1999). Pathologic Basis of Disease. 6<sup>th</sup> Edition. New York: Oxford University Press.
- DiFranza, J. (1994). Tobacco Acquisition and Cigarette Brand Selection Among Youth. *Tobacco Control* 3(2), 334-38.
- Egbochukwu, E.O. & Imo, B.E. (2008). Attitude of Nigerian Secondary School adolescents toward sexual practices: Implications for counselling practices. *European Journal of Scientific Research* 22(2) 177-183.

Ekennia, C.C., Otta, F.E., Ogbuokiri, N.P. (2013). Effect of cognitive restructuring technique and multi-component therapies in the management of nocturnal enuresis among junior secondary schools. *Asian Journal of Management Sciences and Education*, 2(4), 36 – 45

Farkas, A. (1999). Does parental smoking cessation discourage adolescent smoking,” *Preventive Medicine* 28(3):213-218

Frawley, P.J., & Smith, J.W. (2010). Chemical aversion therapy in the treatment of cocaine dependence as part of a multimodal treatment programme: Treatment outcome. *Journal of Substance Abuse Treatment*, 7(2), 21-29.

Fitzpatrick, T.M., & Blair, E.A. (2000). Smoking and pulmonary and Cardiovascular Disease: Upper Airway Complications of Smoking,” *Clinics in Chest Medicine* 21(1):147-157.

Gilman, S.E. (2009). Parental Smoking and Adolescent Smoking Initiation: An Intergenerational Perspective on Tobacco Control,” *Pediatrics* 123(2): e274-e281.

Global Youth Tobacco Survey Collaborative Group (GYTSCG, 2002). Tobacco use among youth: A cross country comparison. *Tobacco Control* 11(1), 252–270

Goldman, *Cecil Textbook of Medicine, 21st Edition*. New York. McGraw-Hill.

Greenlund, K. (1997). Cigarette smoking attitudes and first use among third- through sixth-grade students: The Bogalusa Heart Study. *American Journal of Public Health* 87(8), 1345- 1348

Hajek, P., & Stead, L.F. (2011). *Aversive Smoking for Smoking Cessation*. The Cocharane Collaboration. Uk: John Wiley & Sons, Ltd.

Herman, S. (2007). *The Modification of Smoking Behaviour: A Research Evaluation of Aversion Therapy, Hypnotherapy, and a Combined Technique*. *Published Master Thesis*. Department of Psychology, Wilfrid Laurier University Waterloo, Ontario, Canada.

Hioki, H. (2001). Acute effects of cigarette smoking on platelet-dependent thrombin generation. *European Heart Journal* 22(1), 56-61.

Huppert, J.O. (2009). The building blocks of treatment in cognitive behavioural therapy. *Israel Journal of Psychiatry*, 46(1), 245-250.

Igbokwe, C.C. (2012). Knowledge and attitude of pregnant women towards antenatal services in Nsukka Local Government Area of Enugu State, Nigeria. *Journal of Research in Education and Society*, 3(1), 22 – 32.

International Council on Alcohol and Addiction (2000). Reports and research on substance use in some urban and rural areas in Nigeria: *International council on alcohol and addiction*.

Johnson, G.K., & Slach, N.A. (2001). Impact of tobacco use on periodontal status. *Journal of Dental Education*, 65(4), 313-321

- Martin, T. (2008). Nicotine withdrawal symptoms, coping with nicotine withdrawal: Health's Disease and Condition Content.Uk: John Wiley & Sons, Ltd
- Mathers C.D., & Loncar, D. (2006). Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Medicine*, 3(1), 442 - 432.
- Milam, J. (2000). Perceived invulnerability and cigarette smoking among adolescents. *Addictive Behaviors*, 25(1),71-80
- Mitchell, B. (1999). Tobacco use and cessation: The adverse health effects of tobacco and tobacco-related products and primary care: *Clinics in Office Practice*, 26(3), 463 - 498.
- Ockene, I.S., & Miller, N.H. (2006). Cigarette smoking, cardiovascular diseases and stroke: A statement for healthcare professionals from the American Heart Association. *Journal of American Health Association*, 96(9): 32 - 47
- Odunukwe, J. (2002). *Basic Psychology*. Enugu: Academic Printing Press.
- Owonaro, A. P., & Eniojukan F.J. (2015). Smoking settings, intensity, influencing factors and costs among smokers in Amassoma, Nigeria. *Journal of Natural Sciences Research*, 5(22), 127 – 136
- Paavola M, Vartiainen E, Haukkala A (2004). Smoking from adolescence to adulthood. The effects of parental and own socioeconomic status. *Eur. J. Public Health* 14:417–21.
- Park, K. (2009). *Preventive and Social Medicine* (20<sup>th</sup> ed.). India: Barnasidos Bhanot Publishers.
- Peto R, Lopez AD (2001). Future worldwide health effects of current smoking patterns. In: Koop C.E, Pearson C.E, Schwarz M.R, (eds.). *Critical issues in global health*. San Francisco, Wiley (Jossey- Bass).
- Proescholdbell, R. (2000). Home smoking restrictions and adolescent smoking. *Nicotine and Tobacco Research* 2(2),159-167.
- Rose, J.E. (2001). Acute effects of nicotine and mecamylamine on tobacco withdrawal symptoms, cigarette reward and ad lib smoking, *Pharmacology, Biochemistry & Behavior* 68(2), 187-197.
- Sabiston, E. (1997). *Textbook of Surgery*. 15th Edition. New York. McGraw-Hill.
- Sargent, J. (2000). Strong parental disapproval of smoking prevents adolescents from becoming established smokers. *Pediatric Research*, 47(4), 11 - 18.
- Shobola, A.A. (2007). The study of the effects of cognitive restructuring on cigarette smoking behaviour of undergraduate students. *Ife psychologia*,16(1), 187-197.
- Simons-Morton, B. (2001). Peer and parent influences on smoking and drinking among early adolescents. *Health Education and Behavior*, 28(1), 95-107.
- Stanton, W. (1996). Adolescents' experiences of smoking cessation. *Drug and Alcohol Dependence*, 43(2), 63-70.

Sussman, S. (1988). Adolescent nonsmokers, triers and regular smokers' estimates of cigarette smoking prevalence: when do overestimations occur and by whom. *Journal of Applied Social Psychology*, 18(7), 537-551.

Takeyama, K. (2001). Activation of epidermal growth factor receptors is responsible for mucin synthesis induced by cigarette smoke. *American Journal of Physiology: Lung Cellular & Molecular Physiology*, 280(1), 165-172

Watson, J.B. & Reyner, R. (2000). Conditioned emotional reactions. *Journal of Experimental Psychology*, 3(2), 1-14.

Whitley, A.J. (2010). Ancient Crete: From Successful Collapse to Democracy's Alternative (Book review). *American Journal of Philosophy*, 132(4), 667-670.

WHO Report on Global Tobacco Epidemic (2008). The Mpower package. Geneva, World Health Organization.

Yahaya, L.A. (2014). The Effects of cognitive restructuring on the attitude of secondary school students in Ilorin towards HIV/AIDS patients. *Ilorin Journal of Sociology* 2(1), 104-117.

Zuerev, Y. (2008). Problems of drinking among University drinking in Malawi. *Collegiumm Antropologicum*, 32(1), 27-31.

