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Smoking Cessation and Level of Quitting Among Smokers

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Abstract

An experimental study was conducted to evaluate the effectiveness of smoking cessation measure in terms of level of quitting, among smokers admitted in Rajah Muthiah Medical College Hospital, Chidambaram. The quantitative research approach - A Pre-experimental one group pretest – posttest designwas adopted and conducted at Rajah Muthiah Medical College Hospital among 55 samples, Chidambaram. The target population were the patients who had the habit of smoking. Smokers, aged 20 years and above, who fulfilled the inclusion criteria were the subjects selected for the study. Simple random sample technique was used in selecting samples from the smokers admitted in medical, surgical, and orthopeadic wards.After assessing their smoking behaviour, the participants were advised to quit smoking. Self instructional module focusing on smoking cessation was briefed and handed over to them. For Phase II, 6 participants from Phase I came for follow up. After making the decision to quit, on that day, 1st month, 3rd month, and 6th month later, they were followed up.Each visit took about 45 minutes to discuss regarding the quit attempt and to collect data to validate their quit attempt.The statistical tests, both descriptive and inferential, were used for analyzing the data. The One way ANOVA repeated measure revealed that clinical intervention is effective as improvement in the self efficacy to resist temptation to smoke during overall situation was achieved and the finding was found to be statistically significant at p <0.001.The study results revealed that the level of temptation showed extreme temptation to smoke due to various situations. Most of the subjects were in contemplation and preparation stage of readiness to quit.

Keywords: *Smoking Cessation Measures, level of quitting smoking, Interventions*

Introduction

People who are addicted to nicotine are victims of tobacco epidemic. Like people dependent on any other addictive drug, it is difficult for most of the tobacco users to quit on their own to overcome their dependence[8]. Nurses have the opportunity and competence to assess smoking status, advise on the hazards of smoking, and assist in smoking cessation. It is important for nurses to understand the physical and psychological addiction of nicotine and the social role it plays in many peoples' lives. Health care professionals must provide a nonjudgmental environment that fosters a positive approach in support of cessation instead of instilling guilt or blaming the patient[8]. Hospitalization is thought to be an opportune time to deliver cessation advice for two reasons. First, hospitals commonly have policies that restrict tobacco use. Second, a state of ill health possibly linked to tobacco use, is the best time when the smoker could be open to advice for consideration of cessation of smoking[6]. The nurse delivered, hospital based, smoking cessation intervention studies showed that nursing intervention to help smokers to quit, was successful. Nurse led interventions for smoking cessation increases the chances of successful quitting by 50%[4].The investigator has selected two aspects to offer guidance to the tobacco users to quit i) to warn about dangers of tobacco through health education and ii) to quit the smoking habit through 5 A's clinical intervention.The Agency for Health Care Research developed evidence based clinical practice guidelines for treating tobacco use and dependence. The guidelines identify the "five A's" of clinical intervention that should be used at each patient encounter and these are **Ask** – identify all tobacco users at every contact, **Advice** – strongly urge all tobacco users to quit, **Assess** – determine willingness to make a quit

attempt, **Assist** – Assist in quit attempt, and **Arrange** – schedule follow up contact[3].

Objective

To evaluate the effectiveness of smoking cessation measure in terms of level of quitting.

Materials and Methods

The quantitative research approach wasto evaluate the effectiveness of smoking cessation measure in terms of level of quitting were used among the smokers. APre-experimentalone group pretest – posttest design was adopted and conducted at Rajah Muthiah Medical College Hospital among 55 samples, Chidambaram. The target population refers to patients who have the habit of smoking. Smokers, aged 20 years and above, who fulfilled the inclusion criteria were the subjects selected for the study. Simple random sample technique was used in selecting samples from the smokers admitted in medical, surgical, and orthopeadic wards. The study subjects were interviewed regarding their smoking behaviour, their readiness to quit etc., and data were collected using structured interview schedule from June 2009 to March 2010. After assessing their smoking behaviour, the participants were advised to quit smoking. Self instructional module focusing on smoking cessation was briefed and handed over to them. For Phase II, 6 participants from Phase I came for follow up. After making the decision to quit, on that day, 1st month, 3rd month, and 6th month later, they were followed up.Each visit took about 45 minutes to discuss regarding the quit attempt and to collect data to validate their quit attempt.The statistical tests, descriptive statistics used were mean, standard deviation, and percentage and Inferential statistics such as chi-square, Oneway ANOVA, Comparison Test Contrast Difference Method, Kruskal Wallis Test, and Comparative Test Tukey Honestly Significant Difference Test,were used for data analysis.

Results

Table 1. *Distribution of Smoking and Quitting behaviour among the Subjects(N = 55)*

Variable		Number	Percentage
Types of Smoker	Light Smoker 1 – 10 Cigaretes / day	32	58.2%
	Medium Smoker 11 – 20 Cigaretes / day	15	27.3%
	Heavy Smoker 21 – 30 Cigaretes / day	6	9.0%
	Very Heavy Smoker 30 + Cigaretes / day	2	4.5%
Disorder	Medical disorders	28	50.90%
	Surgical disorders	12	21.80%
	Orthopaedic disorders	15	27.30
Method of quit attempt	Once for all	44	80%
	Gradual	11	20%
Withdrawal Symptoms	Feeling Mad	18	32.73%
	Lack of concentration	13	23.64%
	Headache	18	32.73%
	Irritable	33	60%
	Dull	21	38.19%
	Depressed	4	7.23%

The Above shows the distribution of smoking and quitting variables of the subjects in phase – II.Regarding the types of smokers enrolled for smoking cessation programme, the findings revealed that 32 (58.2%) of them were light smokers, 15(27.3%) of them were medium smokers, 6(9.01%) of them were heavy smokers, and 2(4.5%) of them were very heavy smokers. The types of disorders, the subjects suffered from showed that 28(50.90%) of them had medical disorders 12(21.805) of them had surgical disorders and 15(27.30%) of them had orthopaedic disorders. The method of quit attempt preferred by the subjects showed that 44(80%) of them have chosen, quit smoking once for all and 11(20%) of them have chosen gradual reduction and stopping of smoking within in one (or) two weeks of quit attempt.The withdrawal symptoms experienced by the subjects while making quit attempt, showed that the majority of them 33(60%) became irritable 21(38.19%) felt dull, headache and feeling mad was experienced by 18(32.73%) of them, 13(23.64%) of them felt lack of concentration and 4(7.23%) of the subjects felt depressed.

Table 2. *Effectiveness of 5A's clinical intervention on the mean number of cigarettes smoked/day among subjects in pretest and posttests(N = 55)*

Average number of cigarettes smoked/day	Mean	Standard Deviation	One way ANOVA repeated measures		Contrast Difference Method
			F value	P value	
Pretest	13.09	9.89	70.292	P<0.001 (S)	Pretest Vs Posttest II Vs Posttest III
Posttest I	9.71	9.43			
Posttest II	7.98	9.39			
Posttest III	7.13	8.09			

(S) – Significant

The above Table shows the effectiveness of5A's clinical interventionon the mean number cigarettes smoked/day from pretest to posttest - III. The mean number of cigarettes smoked/day was 13.09 with standard deviation of 9.89 in pretest. It has reduced to 7.13 with standard deviation of 8.09 at the 6th month. The findings indicate that medium smokers have become light smokers at the 6th month. One way ANOVA repeated measures revealed that clinical intervention was effective as the reduction in the number of cigarette smoked per day was achieved and the finding was found to be statistically significant P < 0.001.

Table 3. *Effectiveness of 5A's clinical intervention on the mean nicotine dependency score among the subjects in pretest and posttests(N = 55)*

Nicotine dependence score	Mean	Standard Deviation	One way ANOVA repeated measures		Comparison test Contrast difference method
			F value	P value	
Pretest	4.29	1.60	49.36	P<0.001 (S)	Pretest Vs Posttest I Vs Posttest II Vs Posttest III
Posttest I	3.20	2.10			
Posttest II	2.55	1.97			
Posttest III	2.51	1.87			

(S) – Significant

Table 56 shows the effectiveness of 5A's clinical intervention on nicotine dependency status among the subjects. In the pretest, the mean nicotine dependency score was 4.29 with standard deviation 1.60, and it has further reduced to mean value of 2.51 with standard deviation of 1.87 at 6th month. One way ANOVA repeated measures revealed that clinical intervention was effective as reduction of the nicotine dependency was achieved and the finding was found to be statistically significant at P < 0.001.

Table 4. *Effectiveness of 5A's clinical intervention on mean score of self efficacy to resist smoking during social situations among subjects in pretest and posttests (N = 55)*

Self efficacy to resist smoking during social situations	Mean	Standard Deviation	One way ANOVA repeated measures		Contrast Difference Method
			F value	P value	
Pretest	15.27	5.33	109.721	P<0.001 (S)	Pretest Vs Posttest I Vs Posttest II Vs Posttest III
Posttest I	19.27	5.4			
Posttest II	21.67	6.01			
Posttest III	24.47	6.85			

(S) – Significant

The aboveTable shows the effectiveness of the 5A's clinical interventionon mean self efficacy to resist smoking during social situations from first visit to 6th month. The self efficacy was less with mean value of 15.27 with standard deviation of 5.33 at pretest. During the posttest III, after the interventions, the mean score of 24.47 with standard deviation of 6.85 indicated improvement in self efficacy to resist smoking during social situations. One way ANOVA repeated measure revealed that clinical intervention was effective as improvement in the self efficacy to resist smoking during social situation was achieved and the finding was found to be statistically significant at p <0.001.

Table 5. *Effectiveness of the 5A's clinical intervention on mean score of self efficacy to resist temptation to smoke due to craving situations among the subjects in pretest and posttests (N = 55)*

Self efficacy to resist smoking due to craving situations	Mean	Standard Deviation	One way ANOVA repeated measures		Contrast Difference Method
			F value	P value	
Pretest	15.84	5.58	33.16	P<0.001 (S)	Pretest Vs Posttest II Vs Posttest III
Posttest I	16.91	5.95			
Posttest II	17.75	6.43			
Posttest III	18.55	6.83			

(S) – Significant

The above Table shows the effectiveness of 5A's clinical interventionon mean self efficacy score to resist smoking in craving situations from pretest to posttest III. In the pretest the mean value for self efficacy to resist temptation to smoke during craving situations was 15.84 with standard deviation of 5.58. With intervention, self efficacy to resist temptation to smoke during craving situations has improved to mean score of 18.55 with standard deviation of 6.83. One way ANOVA repeated measure revealed that clinical intervention was effective as improvement in the self efficacy to resist temptation to smoke during craving situations was achieved and the finding was found to be statistically significant at p <0.001.

Table 6. *Effectiveness of 5A's clinical intervention on mean score of self efficacy to resist smoking during negative situations among the subjects in pretest and posttests (N = 55)*

Self efficacy to resist temptation to smoke during negative situations	Mean	Standard Deviation	One way ANOVA repeated measures		Contrast Difference Method
			F value	P value	
Pretest	17.20	6.43	66.03	P<0.001 (S)	Pretest I Vs Posttest I Vs Posttest II Vs Posttest III
Posttest I	19.31	6.45			
Posttest II	20.67	6.85			
Posttest III	22.33	7.81			

(S) – Significant

The above Table shows the effectiveness of 5A's clinical intervention on mean self efficacy to resist smoking in negative situations during the pretest and posttests. The pretest mean value of 17.20 with standard deviation of 6.43 showed that the subjects had low self efficacy at pretest when compared with mean value of 22.33 with standard deviation of 7.81 during posttest III after 6 months. The improvement in self efficacy was further tested for its significance using One way ANOVA repeated measure which revealed that clinical intervention was effective as improvement in the self efficacy to resist temptation to smoke during negative situations was achieved and the finding was found to be statistically significant at p <0.001.

Table 7. *Effectiveness of the 5A's clinical intervention on mean score of self efficacy to resist temptation to smoke in over overall situations in pretest and posttests (N = 55)*

Self efficacy to resist temptation to smoke in overall situations	Mean	SD	Oneway ANOVA repeated measure		Comparison test contrast difference method
			F value	P value	
Pretest	47.73	15.76	133.57	<0.001 (S)	Pretest Vs Posttest I Vs Posttest II Vs Posttest III
Posttest I	54.78	15.80			
Posttest II	59.76	16.74			
Posttest III	64.87	17.65			

(S) - Significant

The above Table shows the effectiveness of 5A's clinical interventionon mean self efficacy to resist temptation to smoke in overall situations. The findings showed that the self efficacy was less with mean score of 47.73 with standard deviation of 15.76 during pretest and it has increased to mean score of 64.87 with standard deviation 10.65 at the 6th month with clinical intervention. The One way ANOVA repeated measure revealed that clinical intervention is effective as improvement in the self efficacy to resist temptation to smoke during overall situation was achieved and the finding was found to be statistically significant at p <0.001.

Discussion

The above Tables showed the effectiveness of smoking cessation measure in terms of the level of quitting as measured by the stage of change and number of cigarettes smoked/day. The findings regarding the level of quitting among 55(100%) subjects. All the 55(100%) subjects were in preparation stage during the pretest. During the posttest after 6 months, it was noted that 34(62%) of them reduced the number of cigarettes, 14(25%) of them quit smoking, and 7(13%) of them still remain in the preparation stage.

This finding is supported by the following studies:

Reid et al. (2009) findings on the evaluation of Ottawa model of application of 5A's approach to cessation showed the confirmed 6 month continuous abstinence rate was higher after, than before introduction of a Ottawa model (29.4% vs 18.3%); odds ratio 1.71, 95 CI = 1.11 – 2.64 / P = 0.02)[5]. Gies et al. (2008) conducted a study to evaluate the effect of an in-patient nurse directed smoking cessation intervention among 68 samples. (Intervention group n = 38/control n = 30). The findings showed that tobacco abstainers at 3 months in intervention group was 17(55%) and in control group it was only 5(21%) samples[1].Seo et al. (2007) findings from the effect of community based smoking cessation programme among 55 adult smokers revealed that the rate of continuous abstinence were 81.8% at posttest, 65.5% at 1 month, 54.5% at 3 months, and 54.5% at 6 months follow up[7].Huang (2005) evaluated the programme of a smoking cessation among 10 adult smokers. The outcome of the study revealed at 9 month followup, five (50%) participants were abstinent and three (30%) participants decreased cigarettes consumption by 49% of their pretest levels[2]. From the present study samples, subjects with low dependence on nicotine (Fagerstrom's Tolerance for Nicotine dependency score upto 6) were chosen for smoking cessation intervention without Nicotine Replacement Therapy. The smoking cessation address as regarding improving self-efficacy to resist temptation due to social situations, craving situations, and negative situations.

Conclusion

Cigarette smoking by youth and young adults has immediate adverse health consequences, including addiction, and accelerates the development of chronic diseases across the full life course.Prevention efforts must focus on both adolescents and young adults because among adults who become daily smokers, nearly all first use of cigarettes occurs by 18 years of age (88%), with 99% of first use by 26 years of age. Advertising and promotional activities by tobacco companies have been shown to cause the onset and continuation of smoking among adolescents and young adults.After years of steady progress, declines in the use of tobacco by youth and young adults have slowed for cigarette smoking and stalled for smokeless tobacco use.Coordinated, multicomponent interventions that combine mass media campaigns, price increases including those that result from tax increases, school-based policies and programs, and statewide or community-wide changes in smoke-free policies and norms are effective in reducing the initiation, prevalence, and intensity of smoking among youth and young adults.

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