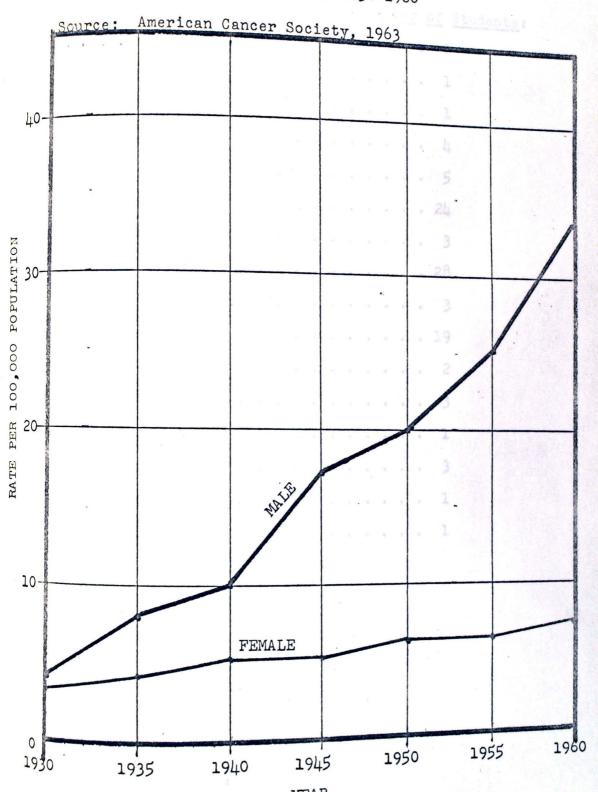
SMOKING HABITS OF JUNIOR HIGH SCHOOL STUDENTS

BY

CARL JOHNSON MASTERS

DEATH RATES OF CANCER OF THE LUNG United States, 1930-1960



LENGTH OF TIME STUDENTS HAVE BEEN SMOKING

Length of Ti	me	:											
	_										Νι	ıml	oer of Students:
10 years .	•	•	•	•	•	•	•	•	•	•			• • 1
9 years .	•	•	•	•	•	•	•	•		•			.ber 1: Studenter
6 years .	٠.	•	•	•	•			•					• • 1
5 years .	•	•	•	•			•		•	•			4
4 years .	•	• ,	•	•		•	•						5
3 years .	•	•											
$2\frac{1}{2}$ years								• .					3
2 years .	•	•	•	•	•	•	•			•			28
l½ years	•	•			•							•	3
l year .	. 10		•	•	•	•		•	•			•	19
9 months	•				•	•			٠.				2
6 months	•				•	•							3
2 months							•						1
1 month .		•		•,									3
2 weeks .	. •	•						•				•	1
only once													1

CIGARETTE AVERAGE PER DAY

Number of Cigarettes Smoked:	Number of Students:
More than $1\frac{1}{2}$ packs a day	2
l½ packs a day	1
l pack a day	10
16-20 cigarettes a day	2
11-15 cigarettes a day	1
6-10 cigarettes a day	42
1-5 cigarettes a day	. 39
Less than one cigarette a day	1

BRAND OF CIGARETTES

SMOKED BY 102 STUDENTS

NEW PROVIDENCE JUNIOR HIGH SCHOOL

Brand of Cigarette:		Number of Students:
Marlboro		40
Winston		Yes (39 No ()
Salem		Yes () 8 to ()
Camel		Yes () No ()
Pall Mall	a comparation	2
Doral		
Kool		Yes () 2 % ()
Silva Thin	the sale along	or and
True	ī.	
Kent	not bed to	Yea () No ()
L & M	Towns	un yes () lwe ()
Virginia Slims	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1
Spanish Maid Cr	ooks (cigars)	Yes () Re ()
Cigars	1 1 1 1 1 1 1 1 AV 61	r (1 1
Pipe		1
Any Kind	ALL MOT	Yes () No 1 to

AGE	SEX ()			GR	ADE (
1	Do you smoke?			GI) 老院提
1.	·	Yes	()	No	()
2.	How long have you been smoking?	()
3.	Do your parents know you smoke?	Yes	()	No	1	1
4.	Do your parents object to you smoking?	Yes					
5.	Do your parents give you money to buy cigarettes?	Yes					
6.	Do you have a part-time job?				No		
7.		Yes	(e) e re	No	() 55
. (•	Do you buy cigarettes with your allowance?						
8.	Does one or both of your parents smoke?	Yes	()	No	()
9.	Have your parents warned you of the hazards of smoking?	Yes))
10.	Do you belong to a school club or athletic team?	Yes	()	No	()
11.	Do you believe smoking is bad for your health?	Yes	()	No	()
12.	Do you think smoking cuts down on endurance and breath control?	Yes	()	No	()
13.	Do you think non-smokers live longer than smokers?	Yes	()	No	()
14.	How many cigarettes do you average per day?	()
15.	Does smoking make you feel more mature and grown up?	Yes	()	No	()
16.	Do you think TV commercials influence junior high school students to smoke?	Yes	()	No	()
17.	My favorite brand of cigarette is	()

This is a copy of the instructions given to the teachers at New Providence Junior High School concerning the smoking survey concerning this paper.

TEACHERS

Please read these instructions to your students concerning the smoking survey.

- 1. Check either "yes" or "no" at the end of each question. Questions 2 and 14 are not to be answered yes or no. Write your answer in on these questions.
- DO NOT write your name on the questionnaire. 2.
- Please be honest! This questionnaire has no 3. effect on your school grades.

To the Graduate Council:

I am submitting herewith a Research Paper written by Carl Johnson Masters entitled "Smoking Habits of Junior High School Students." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts in Education, with a major in Health and Physical Education.

Major Professor

Accepted for the Council:

Dean of the Graduate School

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CHAPTER I

INTRODUCTION

Smoking is one of the most serious problems facing the health of teenagers. Smoking offers no advantages to the human body, although it offers many disadvantages.

Some of the minor disadvantages are: (1) smoking leaves a bad taste in your mouth, (2) smoking leaves a foul odor on you and your clothes, (3) smoking makes your breath smell bad, (4) smoking gives you a sluggish feeling, and (5) smoking discolors your fingers and teeth. The major effect is the damage to the health of the individual. The writer feels the biggest barrier in discouraging smoking is that damages occur later in life rather than at the starting point.

What happens when a person smokes a cigarette?

According to the National Tuberculosis Association (6:1964)

every time one inhales a cigarette, a complex mixture of

smoke particles and gases enter the oral cavity. This

mixture settles on the surfaces of your respiratory tract.

Here some parts of the smoke causes localized damage. The

normal human respiratory system has tiny cilia which remove

dust by beating rapidly in rhythm and forcing the foreign

particles out. Cigarettes tend to slow down or stop the

movement of the cilia, allowing harmful substances to remain in the respiratory tract. Smoking also causes the blood vessels to contract, in turn forcing the heart to work harder to supply blood and oxygen.

Mooney (5:1968) stated:

. . . that in cigarette country, television correctals show two or three handsome, rugged cowboys on beautiful horses. Or there are sports cars, planes or scuba gear. The scene is always one of clean, windswept health. The people have a look of supreme confidence; the lovely girls all smile.

I know another country. It is a land from which few return. I am referring to cancer country. I have been there.

Mooney (5:1968) relates his own person experience of entering a well known Eastern hospital to be checked for cancer. Upon entering the nose, mouth, throat cancer ward populated with people who had been heavy cigarette smokers, he saw a completely different scene than those shown on television. It was mealtime and the men were eating. They were filling small glass tubes with a thin pink liquid. They would hold the filled tubes above their heads and the fluid would drain out into a thin, clear, plastic hose disappearing into a nostril.

"They had to eat this way because the throat, mouth tongue, and esophagus had been cut away in surgery," according to Mooney (5:1968). The entire front of the throat was laid open from just below the jaw, down almost to the breastbone. Each of them had a large wad of absorbent bandage under his

chin to catch the constant flow of saliva pouring out of his mouth.

Mooney had several radiation treatments for his cancer ailments and after all failed, he had surgery. Following surgery he found that his larynx, pharynx, and part of his esophagus had been removed. Thereafter, he breathed through a stoma.

His last statement in this article was "the treat lungs on the third floor, thank God that I have not yet visited there!"

The National Tuberculosis Association (6:1964) stated that nearly seventy million Americans smoke. In 1963, American bought and smoked more than 523 billion cigarettes, at a cost of approximately seven billion dollars.

Smoking is expensive for adults. It is even more expensive for a teenager with a limited allowance.

Statement of the Problem:

The problem was to determine the smoking habits of junior high school student and to establish a program of study on smoking. The survey was conducted with the ninth grade students at New Providence Junior High School during the spring of 1970.

Hypothesis:

It is the writer's hypothesis that there will be more non-smokers than smokers among ninth grade students and

all students who smoke know the effects of smoking on the human body.

Assumptions:

- 1. It was necessary to assume that the students would respond to the survey with complete honesty.
- 2. It was also necessary to assume that the Administration at New Providence Junior High School would cooperate by allowing the survey to take place.
- 3. Furthermore, it was necessary to assume that the teachers in the Mathematics Department would be willing to assist the writer by allowing him to administer the smoking survey during their class periods.

Limitations:

- It was impossible to reach all students individually.
- 2. Every student could not take the questionnaire due to absence on the day of the survey.
- 3. Time for giving the questionnaire was limited to one mathematics class period.
- 4. Only a "yes" or "no" response from the students was possible.

CHAPTER II

REVIEW OF RELATED LITERATURE

There are many effects that smoking has on the human body. These effects are the reasons why we must teach, at an early age, against smoking.

Smoking and Cancer:

Cancer is characterized by the unchecked multiplication of abnormal cells, according to the United States

Department of Health, Education, and Welfare (8:1964)

The department stated that cancer cells build up into masses of tissues called tumors which may invade neighboring tissues. Cancer may also spread from the original tumor site to other parts of the body, causing a general breakdown of vital functions and eventually death.

More than 284,000 Americans die of cancer each year, thus cancer is outranked as a death cause only by heart and circulatory disease (8:1964).

The result of numerous scientific studies (1:1964) have indicated a significant relationship between tobacco consumption and cancer of the lungs. There has also been found an association between tobacco and cancer of the larynx, the oral cavity, the esophagus and the urinary bladder.

Lung cancer is the number one health hazard resulting from smoking. The American Cancer Society (1:1964) claims that cancer of the lung kills approximately 41,000 Americans per year. Scientific studies have shown that there is a direct relationship between the number of cigarettes smoked and the incidence of cancer.

For men who smoke less than a half pack a day, the death rate from lung cancer is seven times greater than for nonsmokers; and for smokers of two or more packs per day, more than twenty times as great according to the American Cancer Society (1:1964).

Smoking is also connected with cancer of the larynx.

Although it is not a common disease, cancer of the larynx accounts for two to five percent of all cancer cases. Early diagnosis is necessary for a cure.

Cancer of the larynx in the United States is primarily a disease of white men in their fifties and sixties according to the United States Department of Health, Education, and Welfare (7:1965). It rarely occurs before the age of forty.

The United States Department of Health, Education, and Welfare (9:1964) concludes that oral cancer can result from smoking. The sites of oral cancer are mainly the lip, the cheek, the gingiva, the tongue, and the oropharynx. The form of tobacco used could be pipes, cigars, cigarettes, chewing tobacco, snuff, etc.

Studies of eighty-eight males and twenty-two females with cancer of the lip and oral cavity by the United States Department of Health, Education, and Welfare (9:1964) resulted in the following findings:

22.9% were excessive chewers.

32.9% were chewers.

41.3% were excessive snuff dippers.

72.0% were snuff dippers.

90.0% were tobacco users.

Smoking and Emphysema:

Emphysema is one of the relatively new harms of smoking as far as the general public is concerned.

Emphysema, according to the Heart Association (4:1965), is a disease which causes great enlargements to occur in the lungs.

Most of the victims of this disease are men
between the ages of 50 and 70. A high percentage of
people who have emphysema smoke and have been heavy smokers
for the majority of their lives according to the Heart
Association.

Smoking Related to Heart Disease: In the concerned.

Evidence shows that smoking has definite effects on the heart. Cigarette smoking has been chiefly implicated

The state of the s

in coronary heart disease. This is a disease of the arteries which supply the heart. The United States Department of Health, Education, and Welfare (8:1964) stated that coronary heart disease accounts for over 500,000 deaths per year in the United States.

The chances of dying from this disease increase progressively with the rate of cigarette consumption. A cigarette smoker has about twice the risk of a non-smoker of dying from a heart attack.

Smoking Warning to the Public:

The Digest of the Federal Trade Commission (3:1968) states "on January 1, 1966, a federal law went into effect requiring the statement, 'CAUTION: CIGARETTE SMOKING MAY BE HAZARDOUS TO YOUR HEALTH,' to appear conspicuously on all cigarette packages."

There is virtually no evidence that the warning statement on cigarette packages has had any significant effect on public sales of cigarettes. In January and February of 1966, cigarette sales were higher than in the same months the preceding year.

The Digest (3:1968) concludes that cigarette smoking today poses a very great, but preventable, public health menace. It is strongly habituating and habitual smokers subject themselves to a number of debilitating illnesses and early death. Despite this, cigarette companies have

spent millions of dollars (in 1966, almost \$300 million) on inducing the people to take up this dangerous health habit. In the interest of fairness to the adults of tomorrow, advertising without an adequate warning should not be permitted to continue.

The preceding related literature is the reason for this smoking survey. It is the writer's hope that this survey can be turned into a program that will give the students a better knowledge of smoking and its effects on the human body.

CHAPTER III

METHODS OF PROCEDURE

The smoking habits of the New Providence Junior High School students were determined by a smoking survey question-naire. The questionnaire form consisted of questions chosen by the writer from various studies and booklets. The questionnaire is on page vi of the Appendix.

The smokers in the survey consisted of 63 males and 39 females. The non-smokers were made up of 98 males and 145 females.

The survey was administered during the math period.

The writer stated the nature of the smoking survey and explained to the students the instructions (Appendix, p. vii).

The survey of smoking habits was administered on two consecutive days. The boys were surveyed on one day and the girls on the next day.

Four students were chosen to assist in tallying the questions. The talleying period lasted about one week.

CHAPTER IV

SURVEY QUESTIONNAIRE RESULTS

The results of the smoking survey were as follows:

Do you smoke?

The findings showed two-hundred and forty-three non-smokers compared to one-hundred and two smokers. The smokers represent 29.5% of the boys and girls involved in the study and the non-smokers represented 70.5%.

How long have you been smoking?

The responses to this question were variable and wide-ranged. The length of smoking ranged from ten years to only having smoked once.

Several odd answers were given concerning the length of time the students had been smoking. Unusual responses were as follows: (1) "When I get a chance," (2) "I quit," (3) "Only at a ball game," (4) "A pretty good while," and (5) "No telling."

Ten percent of the students had been smoking less than one year. Forty-nine percent had been smoking between one and two years. Twenty-six percent had been smoking between two and three years and eleven percent over three years. (See the chart on page iii of the Appendix.)

Do your parents know you smoke?

Of the 102 smokers, 79 said their parents knew they smoked. This represented 77.5% of the smokers in the survey.

Do your parents object to your smoking?

Two hundred and five students stated that their parents did object to them smoking. Twenty percent, or 69 of the students, indicated that their parents had no objection to them smoking. The remaining students (76) did not respond.

Do your parents give you money to buy cigarettes?

This question pertained only to the boys and girls who smoked. Sixteen smokers of the one hundred and two stated that their parents gave them money to buy cigarettes. This was 15.8% of the smokers.

Do you have a part-time job?

On the whole, there were more smokers (52.7%) with part-time jobs than non-smokers.

Do you buy cigarettes with your allowance?

Fifty-nine smokers admitted that they did buy cigarettes from an allowance given to them by their parents or guardian. Forty-three of the smoking students indicated that they did not buy cigarettes with an allowance.

moderni (- '.

Does one or both of your parents smoke?

Two-hundred and fifty-seven (84.8%) of the students tested stated that either one or both of their parents smoked. About fifteen percent (16 students) stated that neither parent smoked.

Have your parents warned you of the hazards of smoking?

Of the three-hundred and forty-five students surveyed, two-hundred and sixty-one stated that their parents had warned them of the health hazards associated with smoking. Eighty-four had received no parental warnings.

Do you belong to a school club or athletic team?

The survey results showed that more non-smokers belonged to a school club or an athletic team than did smokers. Only one-fourth of the smokers belonged to a club or athletic team, while three-fourths of the smokers were not associated with either.

Do you believe smoking is bad for your health?

It was found that eighty-six percent of the students who smoked believed smoking was detrimental to their health.

Do you think smoking cuts down on endurance and breath control?

Three-hundred and one (87.1%) of the students surveyed felt that smoking does cut down on endurance and breath control. Fifteen of the smokers were inclined to think that smoking had no effect on their endurance and breath

control. Eighty-seven smokers felt that smoking had a negative effect on endurance and breath control yet they continued to smoke.

Do you think non-smokers live longer than smokers?

Of the students surveyed, seventy percent indicated that they thought non-smokers lived longer than smokers.

How many cigarettes do you average per day?

The response to this question quite varied. The average ranged from one and one-half packs a day to only two cigarettes a month. There were some odd responses such as:

- 1. no answer
- 2. none
- 3. "One at a ball game."

The mode was approximately ten cigarettes per day. A chart on the results of this question is on page iv of the Appendix.

Does smoking make you feel more mature or grown up?

This question pertained only to those students who smoked. Thirty out of the one hundred and two smokers (29%) actually felt that smoking made them feel more mature and grown up. The remainder of the smokers held the opposite opinion.

Do you think TV commercials influence junior high students to smoke?

Of the three-hundred and forty-five students surveyed, two-hundred and twenty-seven (66%) felt that television commercials influenced smoking. One-hundred and thirteen held the opposite view and five did not respond.

My favorite brand of cigarette is ?.

The response to this question was very widespread.

Marlboro was the choice of forty students (39% of the smokers). Winston was the second choice, with Salem the favorite "menthol" brand. For a better view on the choices of cigarettes, see the chart on page v of the Appendix.

CHAPTER V

SUMMARY AND CONCLUSIONS

The writer assumed that about ten percent of the ninth grade students at New Providence Junior High School would be smokers. The survey results showed that out of three-hundred and forty-five students, one hundred and two smoked. This represented 29.5% of the students taking the survey.

Students who smoked have been smoking entirely too long. One student had been smoking as long as ten years. This means that he had to have been smoking since he was six years old. This also indicated lack of health knowledge pertaining to smoking. Proper parental guidance was also lacking.

Thirty-four percent of the smokers stated that their parents knew they smoked. In the writer's opinion, the reason for smoking rests primarily on the parents. The secondary reason is probably their peer group and another is the lack of health education they have acquired.

Sixty-seven percent of the parents objected to their children smoking while thirty-three percent did not object to smoking.

Sixteen percent of the student smokers admitted that their parents actually gave them money to buy cigarettes.

Fifty-three percent of the smoking students had part-time jobs, while only sixteen percent of the non-smokers had part-time jobs. This can possibly indicate that smokers with jobs could afford cigarettes while the non-smokers could not afford them even if they wanted to smoke.

Over half of the smokers buy their cigarettes with their allowance. Thus parents are playing a major role in their child's smoking, which in turn is detrimental to the child's health.

Eighty-four percent of the smokers stated that either one or both of their parents smoke. Sixty-eight percent of the non-smokers parents smoked. This indicates that the child whose parents smoke is more likely to take up the habit than the child whose parents are non-smokers.

All but eighty-four of the students had been warned of the hazards of smoking. Twenty-one who had not been warned warned were smokers.

On the whole, more non-smokers belong to school clubs and athletics than do smokers. This is definitely a point in favor of these organizations. The writer feels that these students have more of a feeling of belonging plus the fact that smoking is discouraged, even forbidden in some organizations including athletics.

The majority of the smokers felt smoking was harmful to their health and that smoking does limit endurance. Only sixty-one percent of the smokers felt than non-smokers live longer than smokers.

The number of cigarettes averaged per day varied greatly. One student averaged over one and one-half packs per day. This was the maximum in the survey.

Only thirty students who smoked felt that they did this to feel grown up or more mature. Other literature concerning smoking states that feeling grown up is one of the major reasons that children start smoking.

Television seemed to influence smokers to a certain degree. The majority of the smokers and non-smokers felt that television has a large influence on a person who is beginning, or contemplating beginning, smoking.

Marlboro and Winston were the favorite choices of the students at New Providence Junior High School. Salem was the favorite "menthol" brand.

The writer concludes that prevention of early smoking by young people would be centered on parental influence and health education in the schools.

Parental smoking reatly increase the chance of their children smoking. Parents must realize this when they are trying to convince and show their children why they should not smoke. The writer feels that parents must realize the hazards of smoking in order to relay the message to their children.

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one programme and fromt otop.

It is the opinion of the writer that the health program at all schools should be updated. All schools should have the necessary facilities to show the effects of smoking.

CHAPTER VI

RECOMMENDATIONS

This writer believes that <u>health education</u> should be taught each day for one class period in every school in the Clarksville-Montgomery County School System. The areas to be studied in health education need to be decided on by a tresponsible body. The writer feels that a meeting of all health and physical education teachers in the Clarksville-Montgomery County School System should be the first step. Along with these teachers, it would be advisable for a representative (or representatives) from Austin Peay State University to meet with them. With this meeting, a standard program of health education could be decided upon for this area.

In the following pages, the writer has included a program of study for health education concerning smoking.

Recommended Program of Study on Smoking

A. Outline of study

- Explain the respiratory system and how smoke effects it.
- 2. Nicotine
- 3. Smoking and its relationship to lung cancer.
- 4. Smoking and its relationship to heart disease.
- 5. Smoking and its relationship to emphysema.
- 6. Smoking and its relationship to chronic bronchitis.
- 7. Smoking and its relationship to coronary artery disease.
- 8. Smoking and athletics
- 9. Why people smoke
- 10. Reasons smokers should quit

The preceding are items the writer feels should be discussed and explained. The teacher would submit an outline of study to each student. During the first week, the writer would ask the students to write down and bring to class every question they would like to have answered concerning smoking. We, as a class, would discuss and answer these questions.

B. Groups: The writer would have the students choose one of the outline statements and have them work up a report. Assignments would also be made where students would put up posters around school warning of smoking hazards.

- C. Films and Filmstrips concerning Smoking:
 - 1. <u>One In 20,000</u> (film)
 - 2. Cancer by the Carton (film)
 - 3. No Smoking (film)
 - 4. Too Tough to Care (film)
 - 5. "Nature's Filter" (filmstrip)
- D. A qualified doctor would be invited to discuss smoking with the students.
- E. Experiments: The two experiments on pages 23-25 would be conducted.
- F. Evaluation of learning experiences:
 - 1. grading on reports and work done in groups.
 - short written tests on each of the ten items in the outline of study.
 - 3. test over the entire smoking unit. The test of

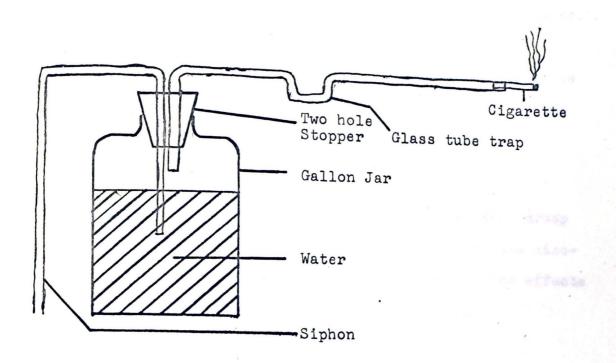
pecials include the apparatus

or and of a tightly fitting

. filled

. Refill

EXPERIMENT I



Explanation:

This demonstration shows the poisonous effects of some of the material in cigarettes and what happens when smoke is inhaled. Necessary materials include the apparatus diagrammed above, a hypodermic needle, a small container such as a cup, and a chicken.

Instructions:

Place the cigarette in the end of a tightly fitting glass tube as shown in the diagram. Light the cigarette and start the siphon. The jug has been previously filled with water. Allow the cigarette to burn completely. Refill

the jug and put in a second cigarette. After burning the second cigarette, empty the contents of the glass trap into a small cup and dilute with about twice as much water. Fill the syringe with the mixture and inject it into a blood vessel under the wing of the chicken. The result is that the chicken will go to sleep. Do not inject all the mixture or it will kill the chicken.

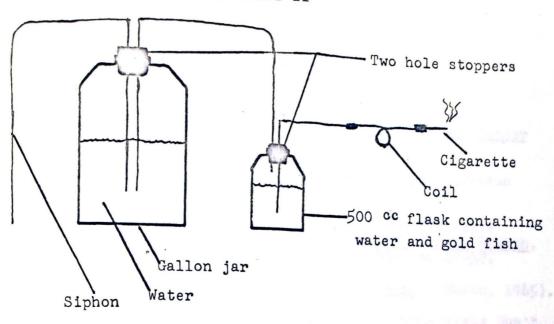
Results:

After the injection, the chicken's head will droop and it will fall into a coma from the effects of the nicotine. In a few minutes it will slowly revive. The effects of this experiment on the hen are long lasting.

Conclusions:

The students will be able to draw their own conclusions on the effects of smoking.

The source of this experiment is Brandis, 1958 (2).



By using the apparatus diagrammed above, a gold fish can be compelled to absorb cigarette smoke into its body. A vacuum is secured by siphoning a gallon of water from a jug attached to a 500 cc flask containing a gold fish.

It usually takes three or four full cigarettes to make the fish lose its equilibrium. The coil is used to show how much tar can be collected from even a few cigarettes. Filters apparently have little effect on the number of cigarettes needed to get the same results.

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Source

EXPECTED TO

DIE BEFORE AGE

PERCENTAGE

OF MALES, AGE

PERCENT

10

0

Non-Smokers

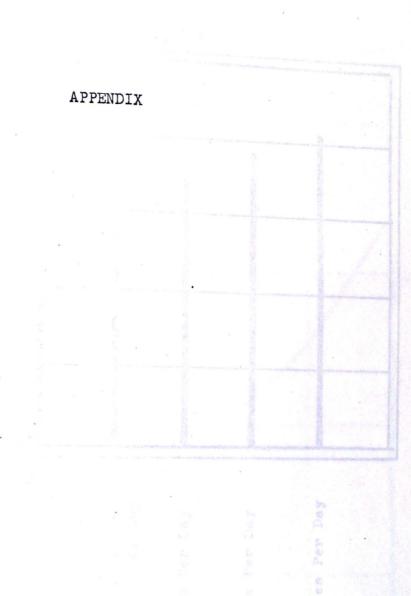
Cigar Pipe Smokers

Less than 10 Cigarettes
Per Day

10-19 Cigarettes Per Day

20-39 Cigarettes Per Day

40+ Cigarettes Per Day



SMOKING HABITS OF JUNIOR HIGH SCHOOL STUDENTS

A Research Paper
Presented to
The Graduate Council of
Austin Peay State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

in

Education

by Carl Johnson Masters July 1970

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