COMMERCIAL AND PROFESSIONAL WEIGHT LOSS ESTABLISHMENTS: ARE THEY DIFFERENT?

by

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Nutrition

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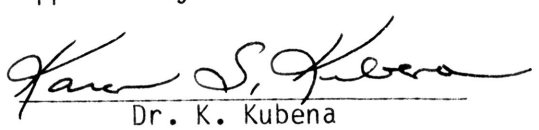

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I. ABSTRACT

A questionnaire was administered over the telephone to a sample of professional and commercial weight loss establishments. The general population the sample was taken from, was the 1983 Greater Houston Yellow Pages. The purpose of the study was to establish the differences between professional and commercial weight loss establishments. The results were surprising and unexpected. There was no statistically significant difference between the two groups. However, qualitative differences did occur, especially in the area of availability and indicate the need for further research in this area.

III. INTRODUCTION

Illiteracy in the United States is not a new concept. Each year it raises its fortuitous head in the testing of our nation's school children. What is new is the regrettably higher price extracted from the individual. In addition to the usual social and economic forces at work, nutritional illiteracy plays Russian roulette with our nation's health.

America as a nation is ignorant of good sound nutritional practices. It is a country where food has come to symbolize mother, home, love and national pride. Our daily diet influences our risk of developing an obtuse list of life-shortening, and predominantly American diseases. The public, generally ignorant of sound nutritional facts, is frequently overwhelmed, not only by the food industry, which spends $7 billion (1) annually trying to get their attention, but a growing platoon of diet-mongers, food faddists, vitamin promoters, and self-styled nutritional con men. Ignorance is a medium quackery thrives on, along with superstition, fear, and the use of misinformation to arouse false hopes. It also takes advantage of man's natural gullibility to believe the unbelievable, and as a result, many decisions are based on prejudice, superstition, half-witted facts and extensive generalizations. Quackery has thus been able to gain a very strong foothold in the nutritional arena. Millions of people search daily for the quintessence of health in jars and bottles of all sizes, composition and price. The current preoccupation with micronutrients

has prompted many a wayward soul to conclude that one may compensate for unbalanced meals and hit or miss eating habits by simply swallowing a pill.

Of the ten leading causes of death in the United States (Table 1), at this time, six are related to diet as one of the risk factors. These are coronary heart disease, cancer, cerebrovascular disease, diabetes, arteriosclerosis and liver damage. The three leading causes of death in our country are diet-related. Of the ten leading causes of death, obesity plays a major role in three--coronary heart disease, which is the nation's number one killer, cerebrovascular disease, and diabetes.

Nineteen percent of the adult male population (Table 2) between the ages of 20 and 74 years of age are obese. This represents 11 million adult males. Twenty-eight percent of the adult female population between the same ages are also obese. This represents a total of 18 million women. This means that one out of every five people in our country is obese.

IV. REVIEW OF THE LITERATURE

"Misery loves company" so the saying goes, and no one is more miserable than someone who is trying to lose weight. Weight reduction clinics, both commercial and professional, have proliferated in the last twenty years to serve an ever expanding market place, not to mention the ever expanding girth of the average American citizen (4). On a weekly basis, approximately one million Americans pass through

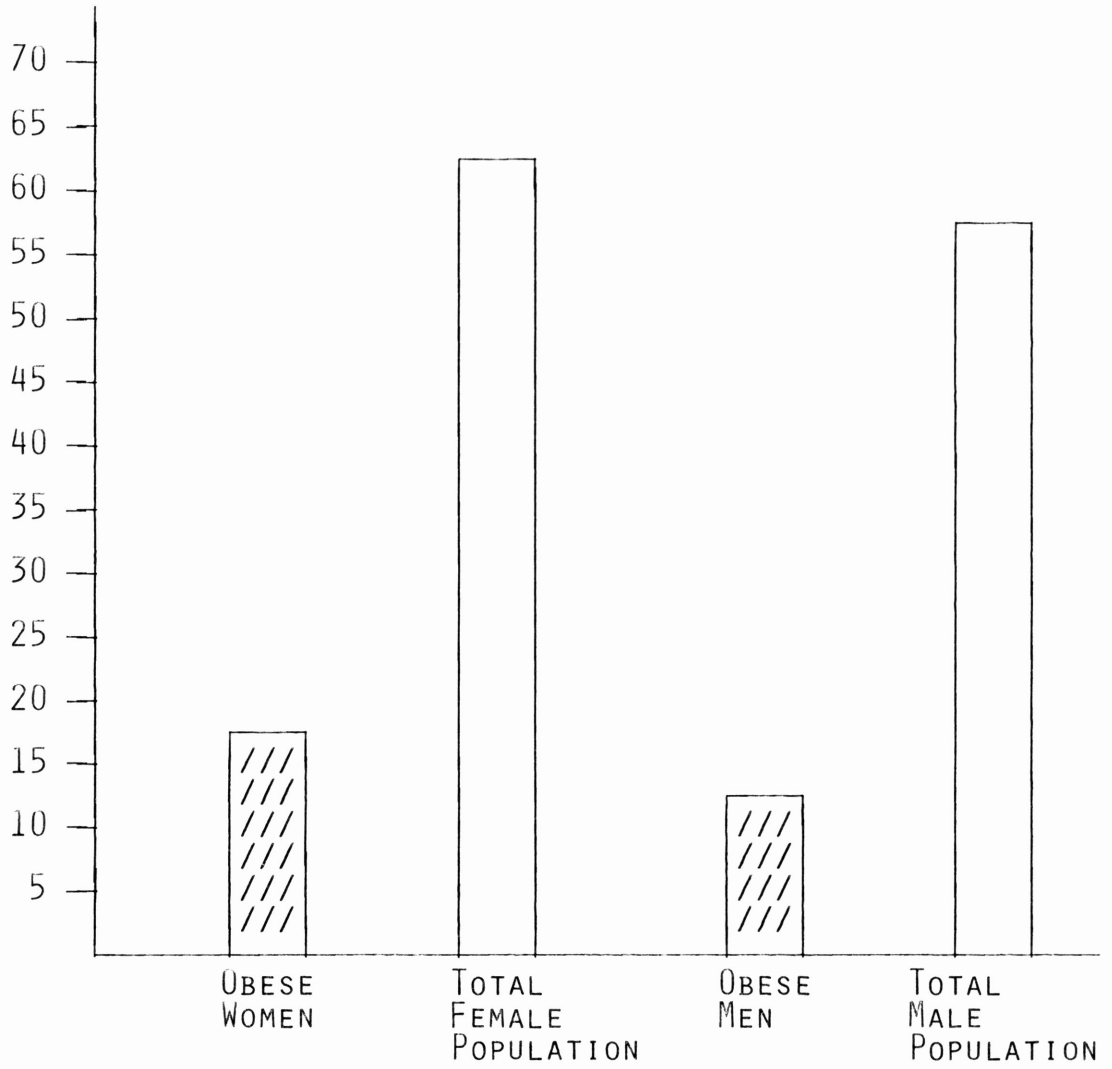
TABLE 1. THE TEN LEADING CAUSES OF DEATH IN THE UNITED STATES[1]

*1. CORONARY HEART DISEASE
*2. CANCER
*3. CEREBROVASCULAR DISEASE
4. ACCIDENTS
5. FLUS AND PNEUMONIA
*6. DIABETES
7. CERTAIN DISEASES IN INFANT MORTALITY
*8. ARTERIOSCLEROSIS
*9. LIVER DISEASE
10. BRONCHITIS

* Diet as risk factor

[1] Understanding Nutrition 2nd ed. (2).

TABLE 2. OBESE MEN AND WOMEN AGES 20-74 YEARS IN THE UNITED STATES 1971-1974[1]
(IN MILLIONS)



[1] NATIONAL CENTRE FOR HEALTH STATISTICS, 1983 (3).

these establishments' doors (5), spending almost $10 billion annually in the pursuit of weight loss (6). Stunkard and McLaren-Hume's (7) classical 1959 review of obesity therapy and their own research, illustrates how the words 'failure' and 'limited success' are often associated with the treatment of obesity. From their review of the literature, Stunkard and McLaren-Hume found that both weight loss and weight maintenance were equally unsuccessful with the majority of subjects gaining back those pounds that were previously lost. They found that although the subjects were severely overweight, that only 25% of them lost 20 lb., while 5% of the subjects lost 40 lb. In their own study with 100 subjects, 12% lost 20 lb., whereas only 1 subject lost 40 lb. More recent reviews have shown (8, 9) that little has changed since 1959. Physicians (5) and behavioral scientists (11) have thus far failed to establish any treatment regimen that is consistently effective and/or of long duration. Williams and Duncan (12) reported that members of a commercial weight reducing organization generated almost double the weight loss in comparison to their counterparts in a professional clinic. They did, however, note that those members of the commercial organization could be considered as motivated to lose weight and joined the organization of their own volition, while the members of the professional clinic were referred by their doctors and therefore not as motivated to diet. Volkmar and his associates found high attrition rates (13) in a commercial weight reduction program. They found that 50% of the members dropped out in the first six weeks, while 70% had dropped out in twelve weeks of the program. Some researchers (14) have found that short term weight

loss, even if the original weight loss is significant, does not guarantee or even increase the likelihood of long-term maintenance, while others (15, 16) have found that the addition of exercise to a weight reduction program increased the long-term success rate.

The literature suggests that differences exist between professional and commercial weight reducing establishments. However, little if any, previous research has been done to identify actual differences between the two. Therefore, this study was done to investigate some of these differences.

V. METHODS

A sample population was taken from the 1983 Greater Houston Yellow Pages. The Yellow Pages were used as this is a resource that is readily available to a greater proportion of the general population of Houston, should the services of a weight reducing establishment be required. There were a total of 102 establishments, which were then divided into five categories. Care was taken to ensure that the resulting random sample of 30 had approximately the same percentages of each category as it did in the original general population. The five categories (Table 3) were diet, exercise, professional, counselling and other. The first group was categorized as diet, as the emphasis of this group was on diet as a means of weight reduction. The diet group represented 31.4% of the total population and 30.0% of the sample. The second group was categorized as exercise, as the main

TABLE 3. CATEGORIES OF THE ESTABLISHMENTS AND THEIR PERCENTAGES IN BOTH THE TOTAL POPULATION AND THE SAMPLE.

CATEGORY	NUMBER IN SAMPLE	PERCENT OF TOTAL POPULATION	PERCENT OF SAMPLE
DIET	9	31.4	30.0
EXERCISE	9	35.3	30.0
PROFESSIONAL	7	12.7	23.3
COUNSELLING	3	14.7	10.0
OTHER	2	5.9	6.7
TOTAL SAMPLE	30	100.0	100.0

thrust of their program was on exercise as a means of weight reduction. The exercise group represented 35.3% of the total population and 30.0% of the sample. Next, the professional group was defined for purposes of this study as those individuals who are trained in the field of nutrition, i.e., a Registered Dietitian. This group represents 12.7% of the total population and 23.3% of the sample. The fourth group was categorized as counselling as this group counselled individuals in order to effect weight loss. The counselling group represented 14.7% of the total population and 10.0% of the sample. Finally, the fifth and last group was categorized as other, which is a miscellaneous group filled with various posers. The other group represents 5.8% of the total population and 6.7% of the sample. A questionnaire consisting of 28 questions was designed to address the following areas (Table 4): the availability of the practitioner; the basis for assessment; diet and exercise recommendations; the type, length, and cost of the counselling sessions; the education level of the practitioner; and finally, to establish the presence or lack of follow-up procedures, and how the practitioner dealt with this area. The bulk of the questionnaire dealt with closed questions of the yes/no variety. Areas dealing with diet, counselling, and the presence or lack of follow-up were handled using a probing or open question format. The questionnaire was then used to conduct a preliminary study with three of the establishments. The results were used to clarify and improve the questionnaire. The study was conducted over the telephone during a one week period. Results from the binomial data were

TABLE 4. Summary of the Areas Covered by the Questionnaire.

Availability of the Practitioner

Basis for Assessment

Diet and Exercise Recommendations

Type, Length and Cost of Counselling Sessions

Education Level of the Practitioner

Follow-up Procedure

then tabulated and analyzed using a Data Base Manager ("B.R.A.D.S. III") on an I.B.M. System 23 computer. The Fisher Exact Probability Test (17) was used in the analysis of the data with an αlevel of .05.

VI. RESULTS AND DISCUSSION

Weight Watchers celebrated its 20th anniversary in 1983, while the Diet Centre celebrated their 10th, in 1982. These landmark anniversaries would appear to be significant statements in our society that weight loss is a high priority for many. In a 1978-1979 Harris poll (18) it was revealed that 2 out of 3 Americans think they would be healthier if they changed their diets, but continue to eat the way they always have because they enjoy it or lack the willpower to change. Most people who lose weight need the help and support of others (12, 19) and although many (13, 20) criticize the commercial weight loss establishments, while subscribing to those a more professional nature, there is very little evidence in the literature to support this point of view.

The area of availability (Table 5) is interesting for its similarities and contrasts between the two groups. Both professional (8.0 hr/day) and commercial (8.39 hr/day) establishments were open for approximately the same number of hours in a day. However, the commercial establishments had a greater dispersion about the mean, with some establishments being open for as long as 24 hours, while others were open for 3 hours. There is a difference of approximately one-half day (5.43 days/week for the professional group and 6.09 days/week for the

TABLE 5. AVAILABILITY OF THE PRACTITIONER IN PROFESSIONAL AND COMMERCIAL WEIGHT REDUCING ESTABLISHMENTS.[1]

	PROFESSIONAL ESTABLISHMENTS	COMMERCIAL ESTABLISHMENTS
MEAN OF HRS/DAY	8.00	8.39
MEAN OF DAYS/WK	5.43	6.09
MEAN OF LOCATIONS	2.14	16.52
WEIGHTED AVERAGE HOURS AVAILABLE	92.96	844.09
TYPES OF ADVERTISING:		
i) YELLOW PAGES	100.00%	100.00%
ii) RADIO	0.00%	15.00%
iii) TELEVISION	0%	15.00%
iv) PAMPHLETS	71.43%	73.90%
v) NEWSPAPER	28.57%	65.22%
vi) DISTRICT NEWSPAPER	42.86%	60.87%
vii) REFERRALS	85.71%	100.00%

[1]PROFESSIONAL = 7; COMMERCIAL = 23

*SIGNIFICANT DIFFERENCE FROM PROFESSIONAL AT $p<.05$.

commercial group), between the two groups, for the number of days the establishment is open in the week. However, a discernible difference occurs between the two groups in the number of locations, and it is in this area that an interesting contrast exists. Total availability of the establishment can be defined (20) as the number of hours/day, times the number of days/week, times the number of locations. Total availability, which is a weighted average, illustrates a large difference between the professional (92.96) and commercial (844.09) groups. The two weighted averages represent total demand for assistance in losing weight. The commercial establishments appear to be recognizing and fulfilling this need, while the professional establishments handle a relatively small proportion of the demand. The large difference between the two groups raises some interesting points concerning professionals in the field of weight reduction. A greater percentage of the weight reducing public turns to unqualified help in order to lose weight. This would appear to be an area of tremendous potential growth for the professional.

Assessment of an individual's physical parameters (Table 6) brought no statistical or qualitative differences between the two groups. This result is surprising as it was thought (by the experimenter) that the professional group would take a more rigorous and scientific approach in this area, when such was not the case.

The approach taken by the respective groups (Table 7) to effect weight loss, brought out the two statistically significant areas of the study. Professionals provided individualized diets ($p=.003$) for their clients and designed their own programs ($p=.002$). The question

TABLE 6. BASIS FOR ASSESSMENT OF PROFESSIONAL AND COMMERCIAL ESTABLISHMENTS.[1]

	PROFESSIONAL YES	PROFESSIONAL NO	COMMERCIAL YES	COMMERCIAL NO	PROFESSIONAL %	COMMERCIAL %
BACKGROUND INFORMATION	6	0	21	0	100.00	91.30
MEDICAL BACKGROUND	5	1	11	12	83.33	47.83
AGE	3	3	7	16	50.00	30.43
HT./WT.	4	2	13	10	66.67	56.52
REQUIRE PHYSICIAN'S APPROVAL	1	6	4	14	14.29	17.39
PHYSICAL ASSESSMENT DONE	6	1	18	4	85.71	78.26
TRICEPS SKINFOLD TEST	2	5	1	22	28.57	4.35
USE OF IDEAL BODY WT.	2	5	6	17	28.57	26.09
METROPOLITAN LIFE INS. CO. TABLES	2	5	2	21	28.57	8.70

[1]PROFESSIONAL = 7; COMMERCIAL = 23

*SIGNIFICANT DIFFERENCE FROM PROFESSIONAL AT $p<.05$.

Table 7. Aspects of Weight Loss Program for Professional and Commercial Establishments.[1]

	Professional Yes	Professional No	Commercial Yes	Commercial No	Professional %	Commercial %
Provide written diet	6	1	12	11	85.71	52.17
Provide individualized diet	5	2	2*	21	71.43	8.70
Require special foods	0	7	6	17	0.00	26.09
Recommend Vitamins/ Supplements	3	4	7	16	30.43	42.86
Sell Vitamins/Supplements	1	6	6	17	14.29	26.09
Exercise-aerobics	1	5	11	12	16.67	91.67
Exercise-Wt. Training	1	5	7	16	16.67	30.43
Counselling-individual	4	1	18	2	80.00	78.26
Counselling-group	1	4	2	18	25.00	8.70
Program Designer-Professional	7	0	7*	16	100.00	30.43

[1]Professional = 7; Commercial = 23

*Significant difference from Professional at $p<.05$.

concerning the program designer illustrates that 30.43% of the commercial establishment programs were designed by professionals. The professional group appears to be taking a more conservative approach than the commercial group, and is emphasizing their specialty, i.e., diet. Current studies (15, 16) indicate that exercise together with diet promotes better weight loss. There appears to be some inconsistency with the professional group in this area. Both groups use individual counselling to help reinforce their methods.

VII. CONCLUSION

The results of the current study dealing with the differences existing between professional and commercial weight loss establishments were unexpected. The differences between the two establishments were not statistically significant ($p=<.05$) and therefore the null hypothesis was accepted. The null hypothesis states that there are no differences between the two establishments. The reasons for this appear to be threefold. First the sample size was small (30) resulting in high p values. The high turnover rate of these establishments resulted in the small sample size. Next, there was very little prior study done in this area. This made it difficult for the experimenter to benefit from the previous experience of others. Finally, it is possible that the null hypothesis is true, and that there is no significant difference between the two establishments. However, due to the small sample size, the lack of previous study and the actual qualitative differences that did exist between the two groups, the acceptance of the null hypothesis is more an indication of the need for further study in this area.

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IX. APPENDIX

1. Type of practice?
   a) professional
   b) commercial

2. How many hours are you open per day?
   a) 8 hrs
   b) >8 hrs
   c) other (specify)

3. How many days of the week are you open?

4. How many locations do you have?

5. What type of advertising do you do?
   a) yellow pages
   b) radio
   c) television
   d) pamphlets
   e) newspaper
   f) local newspaper
   g) referrals

6. Do you get background information on your clients?
   a) yes
   b) no

7. What type of background information do you obtain?
   a) medical background
   b) age
   c) ht/wt
   d) other (specify)

8. Do you give your client a physical assessment?
   a) yes
   b) no

9. Do you require a physician's approval before participating in your program?
   a) yes
   b) no

10. What tests do you perform?
    a) Triceps skin fold test
    b) estimating ideal body wt.
    c) Metropolitan Life Ins. Co. Tables
    d) other (specify)

11. What sort of a program do you recommend?
    a) diet
    b) exercise
    c) counseling

12. What kind of diet do you recommend?

written	individualized
verbal	fluid content
Kcal	fibre content
# meals	prot., fat, CH_2O's
other	

13. Do you sell special foods to accompany the diet?
    a) yes
    b) no

14. Do you recommend vitamins, minerals or supplements to your participants?
    a) yes
    b) no

15. Do you sell vitamins, minerals or supplements to your participants?
    a) yes
    b) no

16. What type of exercise do you recommend?
    a) aerobics/dance/jogging
    b) wt. training/exercise machines
    c) sports
    d) walking
    e) other (specify)

17. How many sessions of exercise do you recommend per week?

18. How long should each exercise session be?

19. What type of counseling do you offer?
    a) individual
    b) group
    c) both

20. What kind of counselling do you do? (i.e., how do you counsel)

21. How many counselling sessions per week?

22. How long is each counseling session?

23. What is the cost of your program?

24. What type of education do you need for this job?

25. Who designs your program?

    a) professional (M.D., dietitian, physical therapist, psychologist/psychiatrist)

    b) nonprofessional

    c) don't know

26. Do you have a follow-up process for your clients?

27. How long is your follow-up of your client?

28. How do you determine if your program is effective?

Answers to questions that were not analyzed:

10. What type of tests do you perform?

    d) other (specify)

    blood pressure
    stress test
    blood test
    urine analysis
    SMAC-20
    measurements
    pap smear

12. What type of diet do you recommend?

    high protein
    low fat
    low carbohydrate
    low Kcal
    4 food groups
    sodium restricted

15. Do you sell vitamins, minerals or supplements to your participants?

    human chorionic gonadotropin (HCG)
    dinitrophenol
    B_{12} injection
    appetite suppressants