ORIGINAL RESEARCH PAPER

Volume-8 | Issue-2 | February-2019 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

INFLUENCE OF VARIOUS BEHAVIOURAL MODULATORS ON EXERCISE BEHAVIOUR IN DIFFERENT AGE GROUPS, GENDERS AND PROFESSIONS

Physiology

Dr. Priya R. Mardikar Professor, Department of Physiology, Smt.Kashibai Navale Medical College &General Hospital, Pune

Dr. Leena S. Phadke* Professor, Department of Physiology, Smt.Kashibai Navale Medical College &General Hospital, Pune.*Corresponding Author

Dr. Varsha S. Sarode Associate Professor, Department of Physiology, B.J.Medical college, Pune

ABSTRACT

Background: Exercise is an effective adjuvant to medical management in prevention and treatment of lifestyle diseases. Knowledge, Motivation and Attitude, the modulators of behaviour have shown to influence the compliance for exercise. Dominance of these modulators on positive and negative exercise behaviour may be influenced by age, gender and profession.

Aim: The present study explores the influence of these modulators on exercise behaviour. Method: 342 individuals were divided into three age groups as Group I (16-20 years; n=181), Group II (21-50 years; n=126) and Group III (50 years onwards; n=35), Males (n=192) and Females (n=150). Group II was subdivided as medical professionals (n=67) and other professionals (n=59). The volunteers' filled the 43 item KAM Questionnaire.

Results: Behavioural modulators like knowledge, attitude and motivation vary with Age , gender and profession (p –value <0.01)

Conclusion: Behavioural modulators affect exercise behaviour, however motivation and attitude for exercise outweighs the knowledge.

KEYWORDS

Age, Gender, Professions, Knowledge, Attitude, Motivation, Exercise Behaviour.

INTRODUCTION:

Lifestyle disorders like Diabetes, Hypertension, Cardiovascular diseases and obesity etc are on rampage in India [1, 2]. Exercise is one of the well-known adjuvant in management of these disorders. [3, 4 ,5]. Yet the percentage population involved in this healthy practice is very less. These results indicate that compliance or adherence for exercise is not an easy task. There are various behavioural modulators like knowledge, attitude, and motivation which are known to influence the exercise behaviour and compliance [6,7]. The dominance of these modulators may in turn be influenced by individual factors like age, gender and profession which in turn may have effects on positive and negative exercise behaviour. However, to the best of our knowledge, the role played by these modulators in exercise compliance in different age groups, gender and professions is less studied in Indian setting. Therefore we thought to undertake this project, the results of which may be useful to formulate the strategies to improve the exercise compliance of the population. In the present study we hypothesize that these behavioural modulators (knowledge, attitude and motivation) may differ and may show differential dominance on exercise behaviour in various age groups, professions and gender in Indian population. The aim of our project was to study the difference in behavioural modulators like Knowledge, Attitude and Motivation for exercise and to study the dominance of these modulators on exercise behaviour in different age groups, gender and professions.

MATERIAL AND METHODS:

Our study was a cross sectional study. It was approved by the Institutional Ethical Committee. Three hundred and forty two individuals were enrolled in the study. The subjects were categorized in different age groups as Group I (16 to 18 years, n-=181), Group II (21 to 50 years, n= 126) and Group III (50 years onwards, n=35). For studying gender differences the total sample was divided into Male (n=192) & Female (n= 150) categories. For studying the effects of profession, the subjects from age group II (n=126) were further divided into Medical (n=67), & IT professionals (n=59). The subjects were given a 43 item KAM Questionnaire (Knowledge, Attitude & Motivation) [8]. The questionnaire was face validated by psychologist and psychiatrist. It was tested in pilot study. The scoring system was developed, and based on scores, the subjects were categorized into Good' and 'Poor' categories for knowledge and motivation. For "Attitude" domain of exercise the subjects were divided into "Negative" and "Positive" categories. "More than 70%" was taken as Good Knowledge, motivation and positive attitude. "Less than 70%" was considered as Poor knowledge, lack of motivation and negative attitude.

Results were analysed using Epi-Info package (WHO). To test the significance of difference in behavioural modulators between two groups "Fisher's p test" was applied and to test the intra group dominance of these behavioural modulators Cochran's Q test was used. P value <0.01 was considered as significant.

RESULTS& DISCUSSION:

Table no 1:- Comparison of behavioural modulators of exercise in various Age groups, Gender and Profession.

Sub Group	Poor Knowledge	Negative Attitude	Lack of Motivation	Non Exercisers
Age group I	54.7	47	96.1	82.9
Age group II	57.1	45.2	80.2	65.4
Age group III	62.9	22.9	57.1	37.1
p value	0.65	0.002 ++	0.001++	0.001++
Males	58.9	38.6	87.1	70.8
Females	52.5	51.1	84.9	73.4
p value	0.144	0.01 ++	0.33	0.34
IT profession	74.6	57.6	84,7	72.9
Medical profession	41	34.3	76.1	59.7
p value	0.002 ++	0.007++	0.16	0.08+
++ Highly significant			+ Marginally significant	

Table no 2:- Contribution of Poor Knowledge, Negative Attitude and Lack of Motivation on Negative Exercise Behaviour.

Sub groups	Poor knowledge (%)	Negative attitude (%)	Lack of motivation (%)	Cochran's Q value	p value
Group I	54	54	98	80.66	<0.01++
Group II	60.2	62.7	23.1	35.91	<0.01++
Group III	53.8	23.1	53.8	13.20	<0.01++
Males	60.1	49.7	95	68.81	<0.01++

Females	50	62.7	95.1	52.71	<0.01++
IT profession	72	72	100	13.71	<0.01++
Medical profession	47.5	52.5	92.5	22.46	<0.01++
++ Highly significant					

Table no 3:- Contribution of Good Knowledge, Positive Attitude and Good Motivation on Positive Exercise Behaviour

Sub groups	Good knowledge (%)	Positive attitude (%)	Good motivation (%)	Cochran's Q value	p value
Group I	41.9	87.1	12.9	28.78	<0.01++
Group II	48.8	88.3	51.3	18.2	<0.01++
Group III	31.8	77.3	40.9	8.84	<0.05+
Males	45.8	88.13	32.2	37.79	<0.01++
Females	40.5	81.08	43.24	14.55	<0.01++
IT profession	18.75	81.25	56.25	15.2	<0.01++
Medical profession	66.66	92.59	48.14	10.9	<0.01++
++ Highly significant			+ Marginally significant		

The different behavioural modulators in the study were compared in different age groups, gender and professionals. We observed that more than 50 % of the subjects in different groups were in poor category for scientific knowledge of exercise (as shown in Table no 1)[9], except in medical profession where only 41% belonged to poor knowledge category. There was no significant difference observed amongst various age groups and gender for knowledge , but definitely when the medical professionals were compared with the IT professionals, they have shown better % of knowledge regarding exercise (p=0.002). These findings reflect the paucity of the mechanisms for spreading the scientific knowledge of exercise on community basis. As shown in Table no 1 there was significant difference observed for attitude towards exercise in different study groups (p=0.002, 0.01 & 0.007 respectively).Older population , males, and medical professionals have shown more positive attitude as compared to younger population, females and IT professionals respectively. The more positive attitude in the older population could be because of more health responsible behaviour as well as because of their wide health related experiences throughout life. Social factors like differences in upbringing may play a role in gender difference for attitude. Better knowledge for exercise may have some influence for positive attitude towards exercise in medical professionals. As shown in table no 1, majority of subjects in different study groups were having lack of motivation for exercise except in older age groups, were motivation was better as compared to younger age group (p=0.001)[10, 11]. These findings could be due to better health responsible behaviour and availability of time in older population while the reasons for lack of motivation in all the other groups were attributed to non-availability of time, laziness, resource problems, and inability to regard exercise as an essential priority [12, 13]. As shown in table no 1, non-exercise behaviour was observed in all groups but to a lesser extent in older people and medical professionals (p= 0.001 & 0.08 respectively).

In older people better attitude and motivation might be promoting the positive exercise behaviour, while better knowledge and positive attitude may be promoting positive exercise behaviour in medical professionals.

When intra group dominance of poor knowledge, negative attitude and lack of motivation was tested by Cochran's Q test for negative exercise behaviour, we observed that "lack of motivation" tops the list amongst all behavioural modulators in all sub groups. As against when intra group dominance for good knowledge, positive attitude and positive motivation was tested for positive exercise behaviour, we observed that "positive attitude" is more dominant than other modulators in all sub groups.

These findings support our hypothesis that the dominance of these behavioural modulators differs in age groups, gender and professions, thereby suggesting that though knowledge is crucial for exercise compliance, the importance of motivation and attitude cannot be ignored. In fact in our study the later two have played more dominant role in deciding exercise behaviour than knowledge.

CONCLUSION:

In conclusion, the present study suggests that behavioural modulators like knowledge, attitude and motivation play an important role in deciding exercise behaviour of an individual. The motivation and attitude outweighs the knowledge, thereby merely spreading the awareness is not sufficient for exercise compliance, instead need based behavioural modification techniques to reinforce motivation and to develop positive attitude will be more beneficial for increasing the exercise adherence and compliance in all groups.

REFERENCES:

1. Yajnik CS. Diabetes in tropical developing countries: Alberti KGMM, Krall LP Eds. The Diabetes Annual / 5 Amsterdam Elsevier, 1990; 72-87
2. Ramchandran A. Epidemiology of NIDDM In Indians. International Journal Of Diabetes Dev Countries, 1995; 15;42-44
3. Ornish D, Scherwitz LM, Doody Rs et al. Can life style changes reverse coronary heart diseases? Lifestyle heart Trail, Lancet, 1990; 336; 129-33.
4. Schuler G, Hambert R, Schlierf G et al. Regular Physical Exercise and low fat diet: effect on progression of coronary artery diseases. Circulation; 1992; 86; 1-11.
5. Paffenburger RS, Hyde RT, Wing AL et al. Physical activity, all cause mortality and longevity of college alumni N engl J Med; 1986; 314;605-13.
6. ACSM's resource manual for guidelines for exercise testing and prescription. William and Wilkins. 5th edition.
7. Robert Jeffery et al. How can Health behaviour theory be made more useful for intervention research? Intl J. Behaviour Nutri. Phys. Act. Vol 1, 2004 (compliance)
8. Parveen Rasheed et al. Overweight status body image for weight control beliefs and practice among female college students. Annals of Saudi Medicine. Vol 19; 4; 1999.
9. Lees FD, Clark PG et al. barriers to exercise behaviour among older adults; a focus group study; J. Ageing Phys. Act. 2005; Jan; 13(1) 23-33.
10. Rhodes RE, Martin AD et al. factors associated with exercise adherence among older adults; an individual perspective. Sports Med. 1999;Dec;28(6);397-411.
11. Resnick B, Spell AM et al. Understanding what motivates older adults to exercise. J. Gerontol. Nurs; 2000; March; 26.
12. Stutts WC; Physical activity determinants in adults; perceived benefits, barriers and self-efficacy; AAOHNJ; 2002 Nov. 50 (11) 449-507.
13. VandenAuweele Y, Rsewnicki R; reasons for not exercising and exercise intentions; a study of middle aged sedentary adults; J sports Sci- 1997 April 15 (2) 151- 65.