

## PHYSICAL ACTIVITY AS HEALTH-PROTECTIVE BEHAVIOR IN MIDDLE AGED ADULT (36-60 Y)

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### **SUMMARY :**

In any preventive health care program for middle aged adults and elderly, the promotion of physical fitness activities has become an item of priority. However, the increased awareness of the importance of being physically fit is in contrast with the limited number of adults actually involved in physical fitness activities. This study focuses on the reasons for inactivity as well as on the perceived motivation to adhere to a fitness program. The health motive was found, as expected, to be the most important motive to start a physical fitness program. Even most of the non- active adults believe that for health reasons they should exercise regularly. Reasons for inactivity include fatigue and lack of energy, lack of time (other things are more important and enjoyable), inadequate facilities, experiencing no health difficulties which would indicate the need for exercise, the implications for their lifestyle and fear of potential health hazards associated with physical fitness activities.

Adherence to habitual physical activity has been motivated by social support and socializing opportunities and the experiences of relaxation, recreation and relief of tension. The discrepancy between knowing about health and fitness and really participating on a fitness program has been interpreted in terms of cognitive processes, behavior modification and changing health life- style.

### **INTRODUCTION :**

research concerning the sports participation of Belgian adults between the ages of 35 and 60 revealed that only 10% is regularly involved in organized sports activities (1,2). Research also revealed that 53% of adults who started a program of physical activity quit the program within three months(8).

These percentages are in contrast with both the multitude regional and local sportpromoting initiatives of adults that have been conceived the last years, and with the increased awareness of the health-related benefits of physical activity.

In the research reported here we tried to find an explanation for the obvious lack for efficiency of many adult oriented sportpromotion programs. We also tried to get more insight in the processes explaining the discrepancy between the belief that one should be more physically fit and not activity on that belief.

A study of the perceived motivation of 800 Belgian adults to participate or not in a regular sport or fitness program was conducted. Non-participating adults were also asked about the conditions which would facilitate a change in their sedentary lifestyle.

### **METHOD**

Procedure – design – questionnaires

Interviews with 50 adults ( sportparticipants and non participants)

Resulted in the listing of 260 incentives and barriers for sportparticipation.

After eliminating redundant and ambiguous items, 220 were registered in two questionnaires. One aimed at the physically inactive adult and consisted of 37 reasons not to participate and 33 conditions one would be encouraged or compelled to become involved ( again) in sports activities.

The second questionnaire intended for physically active adults (consisted) of 150 incentives for adherence in a sports of fitness program. Each item would be scored on a scale ranging from 0 to 3 depending on its relative relevance for the respondent.

1500 questionnaires were circulated throughout the five Flemish speaking provinces of Belgium by 120 students of the physical education institute of the K.U. Louvain. From the 850 questionnaires returned, 839 could be used for further processing.

Being 'sport- active' was described as regular participation in physical activities whether it is organized as well as not organized, excluding work-related physical activities or on foot or bicycle to and from work.

The number of respondents according to sex age profession and province is represented in table 1.

Although we didn't aim for a representative sample we came fairly close to the real proportions of sexes and ages in the Flemish adult population.

Descriptive statistics, factor analytic, univariate and multivariate statistical techniques were used to analyse the answers. Results are subdivided into sections focussing on three different purposes (goals). The first goal was to reduce the concrete motives to a few dominant dimensions and to evaluate these motive-dimensions on their relative importance for all respondents.

The second intention was to reveal differences in importance of motives between adults of different sex, age and profession.

A third goal was to interpret these different motives to participate or not in sport and fitness programs in the context of the cognitive processes and the behavioral self-management strategies involved in health- protective thinking and behavior.

## RESULTS

1. perceived motivation to participate or physical activities (table 2 and 3)

### **Why adults do not or no longer participate in sports activities**

Factor analysis revealed that the 37 non-participation reasons load on 5 factors. Cronbach's for these factors range from 0.60 to 0.75 with a mean of 0.69.

The most important barrier for sport participation seems to be Fatigue.

Sport activities require too much energy after a hard day of work (N1 : Fatigue).

The factor second in importance focuses on the fact that sport activities aren't seen as enjoyable and efficient to relax as other leisure activities such as going to the theatre, listening to music, reading a book... sports activities don't have priority and lack of time is frequently mentioned as the reason for not being physically active (N2 : No priority).

Sports also implicate a certain health risk. The possibility of an injury scares middle aged adults (N3: Risk).

Some adults say that for health reasons they needn't engage in sports activities because they have a healthy lifestyle and enough physical exercise as a substitute for sports e.g. working in the garden, bicycling to work... (N4 : unnecessary).

The last important reason that non-participants mention is that doing sports is very unpleasant because the sport-related inconveniences e.g. changing clothes, showering... and because of worrying about to look ridiculous, awkward or not youthful (N5 : annoyance).

### **Conditions which would encourage, convince or compel a non- participant to consider participation in sports activities**

Factor analyses revealed two factors with a alpha of .87 for both factors. A awareness of a decreased or decreasing physical and/or health condition is the most important condition that instigates adults to consider the suitability of starting a fitness program (C1 : decreased health and fitness).

The second condition includes that the sports activities offered should meet as much as possible their needs, expectations are formulated in terms of arranging sports activities in one's division of time, in terms of presupposed skill level, in terms of adequacy of the facilities and in terms of similarity in social status, interests or moves of the co-participants (C2 : a suitable program should be available).

### **Why adults participate in sports**

Factor analysis revealed 6 factors. Cronbach's alphas range from .62 to .92 with a mean of .82.

Health was found, expected, to be the most important motive to start to adhere in a physical fitness program. Adults see physical activity as an action to prevent from physical discomfort or illness, or to compensate for one sided daily physical activity (W1 : physical health)

The motive second in importance is the mental relaxation motive.

Sports activities are considered to provide a release of tension in the case of critical or chronic stress (W2 : mental health).

Physical activities provide opportunities for socialization in a comfortable, informal atmosphere with friends and acquaintances (W3 : informal social contact).

Fourth in importance is the achievement motivation (W4 : achievement) fourth in importance is the achievement motivation (4 : achievement) and fifth the consideration that sports provide opportunities to experience some physical excitement (W5 : physical excitement).

Adults make it clear that they don't accept to be patronized by instructors or managers they want to keep a certain decorum even if participating in sports on a basic level (W6 : decorum).

2. Differences in perceived motivation to participate or not according to sex, age and profession.

### **Differences in non- participation motives and conditions** (table 4 and 5)

Women bother more about losing decorum than men, they think more they will look ridiculous and are more annoyed by the sport related inconveniences. However, women are more likely to consider sports as an efficient means to ... decreased health and are less relevant to take the first step to initiate a physical fitness program. Men often use minor abilities and handicaps as a relational for not engaging.

It seems that adults over the age of 45 often consider themselves to be very fragile.

Inactive housewives try harder than working women to avoid overdoing themselves and consider sports as unnecessary whereas working women choose more to spend their leisure time quietly at home.

### **Differences<sup>1</sup> in participation motives** (table 6)

Sporting women are more occupied with socialisation and keeping decorum than men. Sporting men have a higher need for achievement.

Health reasons and socialisation motives became more incentive, while the relaxation motive, the search of physical excitement and especially the need of achievement decrease in importance.

Middle class adults and to a lesser degree also higher class adults rate motives as relaxation and excitement higher than blue collar workers. The blue collar worker have a higher score on the need of achievement and are more motivated by health reasons and by the socialisation opportunities provided by physical activities.

## **DISCUSSION**

According to health psychologist VINCK, every individual is constantly observing, judging and interpreting the condition and functioning of his own body. Usually these observations

<sup>1</sup>- Only the motives with the highest discriminant function coefficients were considered in the interpretation. These motives are noted table 6 with a point.

doesn't reveal anything alarming because the discomfort or physical malfunctioning noticed deviates from an individual's subjective standards within acceptable limits.

If an unacceptable deviation from the norm is observed, which is the case more often as one grows older, then attention is given to it and causes are being searched. That process of causal attribution is important since the resulting decisions as to what to do about it depend upon it.

The nature of the observed physical deficiency itself of course considered but cognitive factors as well determine the causal attribution process the individual's self concept (e.g. I don't complain easily) and the general idea he has about the causes of illness and health (e.g. illness is a result of infections programs in relationships, incorrect eating patterns... health is more determined by heredity factors than by lifestyle...).

Such cognitive factors are an important part in one's feeling sick. Whenever one is told that he is sick, he begins to look for symptoms. Usually one finds something. Any bodily sensation can be judged a symptom. Vice versa one will not accept that he is sick if he experiences no symptoms in those cases don't expect that someone will change his behavior because of a non-existent discomfort or illness. This is probably one of the major reasons why prevention isn't an easy saleable product and why people say that sports are unnecessary.

There is no pressing reason for starting physical activity as health protective behavior since there is no awareness of an alarming discomfort.

Some people however do act to preserve and protect their health without experiencing alarming symptoms. That behavior depends upon the priority health and a healthy lifestyle has as an individual's self-concept and the hierarchy of his important life goals.

Our research findings show that the oldest respondent and those of high level professions were the most motivated by real and possible threat of poor health.

Once the deviation from the norm is interpreted it appears that people are trying to initiate some health protective behavior on their own. Only after experiencing no success with these efforts they decide to consult some expert (a physician, dietitian...) or join an organized health program.

Usually a whole process of reflections precedes that decision.

First a choice is made among different possibilities of health protective behavior based on a subjective appreciation of their respective functional efficiency (to get one's figure back within reasonable proportions) it is for example more efficient to modify eating patterns than to participate in sports activities).

A next step would include a cost-benefit analysis in terms of energy and possible risks (To relax by reading a book costs less energy and can be more efficient than the relaxation one gets out of swimming on a cold winter night).

When an individual has initiated a sports program, whether or not he will adhere depends upon the degree to which the sport offer can provide enjoyment (intrinsic motivation) and can satisfy the needs mentioned earlier in this report (socialisation, relaxation, thrill, achievement). It depends also on the extent to which the activities offered can meet the specific health improvement expectations. Finally the crucial factor for adherence happens to be a sense of personal commitment (to continue) and the integration of that initiated sportive behavior in one's weekly life scenario.

The high drop out figures (53% after 3 months) in Belgian rates adult oriented programs show rather that this is unsatisfactorily the case.

On the one hand, changing lifestyle, daily routines and habits don't seem to be that easy; on the other hand sport policy makers and organizers aren't fully aware of the motives and expectations with which adults join a program.

## CONCLUSION

Even though the majority of adults regard less their participation associate sports activities with good health, many aren't spurred to action because their health isn't outweigh the cost in energy and risk ; and also because neither personal initiatives nor the organizes sports programs offerd come sufficiently up to their expectations.

Finally starting and continuing a physical fitness program requires personal commitment and integration of new attitudes and behaviors in one's life scenario and time scheduling.

Any health promotion policy intested in educating and motivating adults to chabge their behavior and to adjust their priorities, must be familiar with what adults belive and want. The differences in stress given to the different motives by important subgroups of adults should taken into account, and paternalism should be avoided. It is important that participants believe that they have input in the choice of their activities and get the feeling that some progress or improvement is made regarding the health complaints which spurred them to ction.

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**Table 1** :Number of adult participants and non participants in a fitness program according to their age, sex and profession.

Flemish of belgium	Non-participa		N= 300		Participants		N= 500
	%	n	%	n	%		
<b>SEX</b>							
Man	49	144	49	234	62		
Woman	51	148	51	207	38		
Total	100	292*	100	547*	100		
<b>AGE</b>							
25-34		-	-	81	15		
35-44	39	70	25	178	33		
45-54	41	157	58	212	39		
55+	20	45	17	16	13		
Total	100	272*	100	547*	100		
<b>Profession</b>							
Men							
High		55	39	186	66		
middle		25	18	49	18		
low		60	43	44	16		
Total		140*	100	270*	100		
Women							
Housewife	61	87	59	67	40		
Working outside							
The home	39	61	41	102	60		
Total	100	148*	100	169*	100		
<b>PROVINCE</b>							
West-Flander	16	55	19	69	13		
East-Flander	19	26	9	32	6		
Antwerp	23	67	23	140	25.5		
Limburg	10	52	18	67	12		
Bradant	32	85	29	236	43		
BSD-Germany**		7	2	3	0.5		
Total	100	292*	100	547*	100		

\* Whenever personal information was incomplete, the respondent was excluded. This was especially the case when reporting profession. This result in different summation.

\*\*BSD-Belgain Military Troops in Germany. This military personnel, their families and the supporting services are considered as a Belgain province.

\*\*\*National Institute for Statistics. Statistic yearbook for 1986; 106; 28, 29, 32, 499.

**Table 2** :survey of the motivational factors ; for each factor two specimens of the items and their factor loading ; n =number of items, alfa=coefficient of item consistency (cronbach).

<b>why adults do not participate in sports activities</b>	<b>Factor loading</b>
<b>N1 SPOTS ACTIVITIES REQUIRE TOO MUCH ENERGY</b> (n=3 ;alfa=.60) -because its too much me to participate in sports activities after my work -because it takes up the entire evening which i prefer to keep free so that i can recuperate from the stress of the day	.65 .61
<b>N2 OTHER FREE-TIME ACTIVITIES TAKE PRIORITY</b> (n=3 ;alfa=.64) -because i can relax or have recreation through other activities -because physical exercise does't interest me	.52 .68
<b>N3 SPORTS ACTIVITIES CARRY TOO MANY HEATH RISKS FOR MIDDLE-AGED PARTICIPANTS</b> (n=4 ;alfa=.75) -because at my age i try to avoid taking risks -because one can easily overdo it, which isn't healthy	.61 .67
<b>N4PEOPLE HAVE ENOUGH PHYSICAL EXRCISE WITHOUT EXTRA SPORTS</b> (n=8 ;alfa=.74) -bacause i get enough exercise though my work -because i work a lot in my garden	.61 .52
<b>N5 SPORTS ACTIVITIES ARE UNPLEASANT AND ANNOYING</b> (n=5 ;alfa=.71) -because i think that i will look ridiculouse to the others -because i don't want all the extra inconveninces (e.g. changing clothes, showering, etc...)	.77 .40
<b>Conditions which would convingce non participants to participate</b>	
<b>C1 DECREASED HEALTH AND FITNESS</b> (n=9; alfa=.87) - (if) I should experience physical complaints discomfort. - (if) I should feel a difinite degeneration in my general condition or fitness.	.67 .81
<b>C2 SUITABLE FITNESS PROGRAM SHOULD BE AVAILABLE</b> (n= 8; alfa = .87) - should there be a suitable groupe. - if I would know someone in the group.	.81 .74

**Table 4 :** results of ANOVA – means and standard deviations of the motives of non participation according to sex age and profession

Barriers for Starting A physical fitness (sports) program	Fatigue		LACK OF TIME		HEALTH RISK		NO NECESSITY		ANNOY – ANCE		
	X	SD	X	SD	X	SD	X	SD	X	SD	
Sex											
Men(n=144)			0.99	0.76	1.14	0.79			0.44	0.45	
Women(n=148)			1.15	0.75	0.93	0.83			0.72	0.65	
T_test			-1.79°		2.19				-4.24		
Age											
35-45yrs(n=70)			0.73	0.67							
45-49yrs(n=85)			1.12	0.84							
50+(n=131)			1.15	0.84							
F – test			7.54								
Profession											
Housewife(n=87)	1.29	0.71			1.06	0.85	1.11	0.66			
Working outside Home(n=61)	1.61	0.69			0.75	0.77	0.81	0.53			
F – test	2.72				-2.23		-2.88				

Sign. Tested at p= 0.001\*\*\*

0.01\*\*

0.05\*

0.10°



**Table 5 :** Resultats of ANOVA - MEANS and standard deviation of the conditions for possible future adherence started by non –participations according to their sex.

Possible future Adherence	In case of decreased health		When asuitable Program is available	
	X	SD	X	SD
Sex	1.26	0.71	1.03	0.65
Men(n=144)	1.45	0.68	1.28	0.68
Women(n=148)				
T-test		-2.32*		-3.10*

Sign. Tested at  $p= 0.001^{***}$

0.01\*\*

0.05\*

0.10

\*only significant differences are reported.

**Table 6 :** resultts of ANOVA 6 meansand standard deviations of the motives for adherence of sport participants according to their sex, age and profession.

### SEX

MOTIVATION DIMANTION	DICRIMINANT FUNCTION COEFFICIENT***	GROUPS	GROUPCENTROIDS
Achievement	-1.11	Men(n=340)	-.29
Health	.19	Women(n=207)	.48
Soc.contact	.46		
Decorum	.57	Canonical correlation	.36,sign 0.0000
Relation	.00		
thrill	.03		

### AGE :

MOTIVATION DIMANTION	DICRIMINANT FUNCTION COEFFICIENT***	GROUPS	GROUPCENTROIDS
Achievement	.70	<34(n=81)	.78
Health	-.95	35-44(n=178)	.14
Soc.contact	-.32	45-54(n=212)	-.21
Decorum	.03	>55 (n=16)	-.58
Relation	.45	canonical correlation	.37 sign.0.0000
thrill	.41		

**PROFESSION:**

<b>MOTIVATION DIMANTION</b>	<b>DICRIMINANT FUNCTION COEFFICIENT***</b>	<b>GROUPS</b>	<b>GROUPCENTROIDS</b>
Achèvement	-.59	High (n=186)	<b>.06</b>
Heath	-.32	Middle (n=49)	<b>.28</b>
Soc. Contact décorum	-.33 .00	Löw (n=44)	<b>-.58</b>
Relaxation	.45	canonical	<b>.25</b>
Trille	.89	corrélation	