

Age-specific reasons for dropping out of the Fitness-Sport

GEORGE ZAROTIS¹, IOANNIS ATHANAILIDIS², VASILEIA ARVANITIDOU³, CHRISTOS MOURTZIOS⁴

¹ University of the Aegean – Department of Primary School, Rhodes, GREECE

² Democritus University of Thrace- Department of Physical Education and Sports, Komotini, GREECE

³ Teacher of Physical education in Primary School, CRETE

⁴ Teacher of Physical Education in Primary School, Lesvos

Published online: June 30, 2017

(Accepted for publication June 25, 2017)

DOI:10.7752/jpes.2017.02140

Abstract:

The main goal of the present research is the study of the various reasons for quitting activity in a gym are age-dependent. In other words, are the motives for quitting this activity different in older people than in younger people? According to the life stages, do other aspects, e.g. priorities in life, health problems or other family and professional requirements, affect the decision and, if so, how strong is their effect? A total of 225 people, who had terminated their contract with a fitness studio, were questioned. The survey was conducted as a telephone inquiry about their actual decision. The study was conducted in a health-oriented fitness centre in east Cologne. The fitness facility was opened in 1994 and has a size of 1,100 square metres. At the time of the study, the gym had up to 1.151 memberships. Among them, 59% of the members were women and 41% were men. The gym faces strong competition. Overall, it is found that only a few of the quitting reasons offered in the survey are also indicated in significant frequency as important for the quitting decision. With the exception of membership costs, these reasons have nothing to do with studio conditions, but rather, apart from the mentioned health problems, mainly address issues of time scheduling and prioritizing the training in relation to other areas of life. Significant trends in the age dependency of the *relevant* quitting reasons can be verified in three reasons: Health problems as a quitting reason are significantly stronger the older the respondents are and "Professional obligations" and "regular training timetable not compatible with my schedule" as quitting reasons showed a significant, negative correlation with age, and thus become less important as age increases.

Key words: age-specific, drop out, fitness-sport

Introduction

In the evaluations and statistical analyses presented here, it is examined to what extent the various reasons for quitting activity in a gym are age-dependent. In other words, are the motives for quitting this activity different in older people than in younger people? According to the life stages, do other aspects, e.g. priorities in life, health problems or other family and professional requirements, affect the decision and, if so, how strong is their effect?

High drop-out rates in sports programs are no exception. The long-term commitment of sport active people poses a problem. This also applies to fitness training in studios, as about half of the members end their training prematurely (Rampf, 1999). The question concerning the reasons for dropping out hasn't, so far, been studied in Germany, so the knowledge about it is only incomplete. Problematic therefore is also the indication of average drop-out rates in German fitness studios because they are not recorded or published.

Oldrige (1982) analyzed ten sports programs in the context of preventive measures, setting cancellation rates from 13% to 75%. Analysis of another 18 prevention programs showed drop-out rates from 3% to 87%.

In the Franklin study (1988), a quitting rate of 46% was found. The study concluded that dropouts are the rule rather than the exception, and that the first half year and the end of the program are critical for quitting. Furthermore, according to the results of the study, dropouts are more affected healthwise than the ones remaining. In addition to the medical and psychological reasons for quitting, the factors "lifestyle and individual living conditions" are mentioned.

In the studies by Gettmann et al. (1983) and Song et al. (1983) similar factors were identified for quitting a program. In the first place almost always appears the factor "lack of time". Furthermore, the dropouts from a company sports program mentioned the factors "illness in the family, lack of interest in the sports program and inconvenience during the journey to the training" (time consuming, expensive, etc.). In the study by Oldrige (1979) 42% of the dropouts from a rehabilitation program for patients with coronary diseases mentioned "psychosocial reasons" (e.g. lack of interest, problems in the family). 25% of the dropouts

mentioned "unavoidable reasons" (e.g. occupational conflicts, change of employment, change of residence), 22% gave medical reasons and 11% other reasons for quitting.

Brehm and Eberhardt (1995) questioned fitness studio members about their reasons for quitting training because they had not renewed their membership when their contract ended. The "lack of fun in the sporting activities" was mentioned as a priority factor for quitting the activity. In addition, "motivation problems" (e.g., laziness), "lack of time" (often due to heavy workload) and "financial reasons" (too expensive membership fees) were mentioned as reasons for quitting. In an open question the members were asked for a specific reason for quitting. On this occasion criticism about the "studio atmosphere" (too impersonal) was mentioned, as well as "lack of social support" (e.g. no contact with other members, partner has quit the training, etc.) and "high membership costs" (also for additional services like childcare).

Pahmeier (1997) also investigated which factors influence the decision to quit a sports program and found that among 65 respondents each gave an average of 3.6 reasons. The main problems that affected the quitting decision in this case were time management and factors of living and working conditions.

These studies show that quitting a sports program always depends on several factors. The features of quitting a sports activity may be personal and situational characteristics (Rampf, 1999).

It is often possible to identify reasons which ultimately lead to dropping out, but the participation behaviour is influenced by a complex factor structure. Dishman (1982) several times remarks critically on the often unsystematic approach of many studies and describes them as atheoretical. He criticizes the limited data base and imputes it to the lack of uniform models that could simplify research.

Due to this lack of standardization of theories and examination methods, the comparability of the studies is severely restricted.

Material & methods

Survey methodology

A total of 225 people, who had terminated their contract with a fitness studio, were questioned. The survey was conducted as a telephone inquiry about their actual decision.

The advantages of the telephone survey are the low cost per interview, the possibility of responding to queries and the high external validity. Disadvantages are the lower possible data volume caused by the difficulty to access the responder or lack of interest in a telephone survey, and the possible influence of the interviewer (Homburg & Krohmer, 2008).

Presentation of the study's fitness facilities

The study was conducted in a health-oriented fitness centre in east Cologne. The fitness facility was opened in 1994 and has a size of 1,100 square metres. At the time of the study, the gym had up to 1.151 memberships. Among them, 59% of the members were women and 41% were men. The gym faces strong competition. There are competitors who pursue a high price policy, one of which is a provider with a wellness area, but also providers with low price policy. The competitors' pricing is between €15 and €129 a month.

The study's fitness centre is located at the edge of the forest and about 250 metres from the nearest bus stop. It is also easy to reach by car or by bike or on foot. There is enough parking available. The members are greeted and welcomed personally at check-in and check-out in the reception area. This creates a personal atmosphere. The fitness studio offers group programs such as gymnastics for the spine and back, for the abdomen, legs and buttocks, body-styling, spinning courses, energy-step courses, Pilates, Yoga, Zumba, Progressive Muscle Relaxation according to Jacobson and rehabilitation sports courses. The group programs are held daily from Monday to Sunday. Furthermore, there is a wide range of strength and endurance equipment, vibration devices, electrical muscle stimulation (EMS) devices and a small space for free weights. There is a sauna and a solarium, and a small wellness space with shiatsu massage armchairs and water massage. The gym offers chargeable drinks. The training and group program staff consists mainly of persons with sports science education. The fitness centre is open almost 360 days a year. The opening hours are Monday to Friday from 9 am to 11 pm and on weekends and on holidays from 10 am to 7 pm. Membership fees are graded according to the type of membership (course membership or equipment membership or both), duration of membership (12 or 24 months), and payment method (monthly or advance payment). The monthly fee ranges thus from 30 to 57 Euros. In addition there is a registration fee of 80 Euros.

The survey was conducted by telephone in July 2016. The respondents are persons who have terminated their membership in the period between 01.07.2015 and 30.06.2016. In the aforementioned period, 305 members departed. Of those 225 persons were found and questioned. 54 people could not be found, probably due to relocation or change of the telephone number. 26 persons did not wish to participate in the survey. The persons were asked about the importance of different reasons for their decision to leave the gym. They were asked to rank the importance of each of these 19 reasons for leaving in a five-point Likert scale. The scaling ranged from "does not apply at all" (coded with the numerical value 1) and "applies strongly" (coded with the numerical value 5). The three intermediate stages were not verbally expressed in the questionnaire; only the polarity of the scale was verbalized over the two extreme points.

Thus, the total of 19 individual subjects were considered as scale marks regarding the significance of individual quitting reasons even in the strict meaning of the metric theory, which in statistical evaluation makes

the calculation of mean values and the use of parametric statistical methods possible. In most of the questionnaire items there were no response refusals, so that in 14 of the 19 questionnaires there are valid values even $N = 225$. In three items there was a missing value, i.e. a person refused to respond, in one item there were 2 missing values and in another item 3 missing values. The age of the interviewees was recorded in whole years; here, in one case, there was a missing value, so that in $N = 224$ cases the information about the age is in years.

Statistical approach

In the data analysis, the sample characteristics are initially described in terms of gender distribution, age and duration of membership in the studio.

With regard to the question of the relationship between the importance of quitting reasons and the age, the respondents of the sample are presented in a *descriptive manner* in their distribution characteristics of the reasons for quitting and by age groups. Therefore respondents' age data were divided into the following four age categories:

- Age group 1: Respondents up to 25 years old
- Age group 2: Respondents between 26 and 40 years old
- Age group 3: Respondents between 41 and 55 years old
- Age group 4: Respondents from 56 years old and over

To ensure the inferential statistic of the relationship between the quitting reasons and the age, however, these age groups are not used, but correlations with the Pearson correlation coefficients, to make use of the full variance of the characteristic age in the correlation analysis.

These correlations are used to determine for each quitting reason the extent to which the age determines the importance of this reason in this sample, and whether such a relationship in the sample -if it is worth mentioning- is statistically significant. The conventional significance level of $p < .05$ is used here. If the values are below the significance threshold, it can be assumed that the correlation can be generalized, beyond the sample, to all the reasons and does not merely represent a random effect of this specific sample.

Results

Sample description

The sample consists of almost 3/4 of female respondents and 1/4 of male respondents. The age range is between 16 and 74 years with a respondents' mean age of 43.5 years and a distribution of 13.0 years. In the age categories mentioned, most respondents (42.9%) are in age category 3 and a further 31.3% is in age category 2. Very young respondents represent only 9% of the respondents and respondents over 55 years 17% of the respondents. Contract terminations were made on average after 4.4 years of membership, with a very large distribution (standard deviation) of 3.8.

Table 1: Sample distribution characteristic values

		Quantity	%	Mean	Median	SD	Quantity
Gender	female	164	72,9%				
	male	61	27,1%				
	total	225	100,0%				
Age				43,5	43,0	13,0	224
Membership duration (years)				4,4	3,0	3,8	225
Age category	Up to 25 years	20	8,9%				
	26-40 years	70	31,3%				
	41-55 years	96	42,9%				
	> 55 years	38	17,0%				
	total	224	100,0%				

Descriptive statistics

Importance of quitting reasons in general

Table 2 shows the mean value, median and standard deviation of the questions concerning the quitting reasons.

Table 2. Mean value, median and distribution of quitting reasons

	Mean value	Median	SD	Quantity
no fun anymore	1,3	1,0	,9	224
too boring	1,2	1,0	,7	225
others interests	1,3	1,0	,9	223
offered too little healthwise	1,1	1,0	,4	222
problems with daily schedule	2,9	3,0	1,8	225
dissatisfied with customer composition in the studio	1,1	1,0	,4	224
dissatisfied with instructors supervision	1,1	1,0	,4	224
crowded training space	1,4	1,0	,9	225
lack of training progress	1,0	1,0	,1	225
difficult access to the studio	1,2	1,0	,7	225
dislike studio atmosphere	1,2	1,0	,7	225
personal health does not allow further training	1,8	1,0	1,5	225

too lazy to continue the training	1,2	1,0	,9	225
professional obligations	2,2	1,0	1,7	225
domestic / family obligations	2,0	1,0	1,6	225
membership costs too high	2,0	2,0	1,2	225
relocation	1,2	1,0	,8	225
too little support from friends/family	1,0	1,0	,0	225
regular training timetable not compatible with my schedule	2,2	1,0	1,7	225

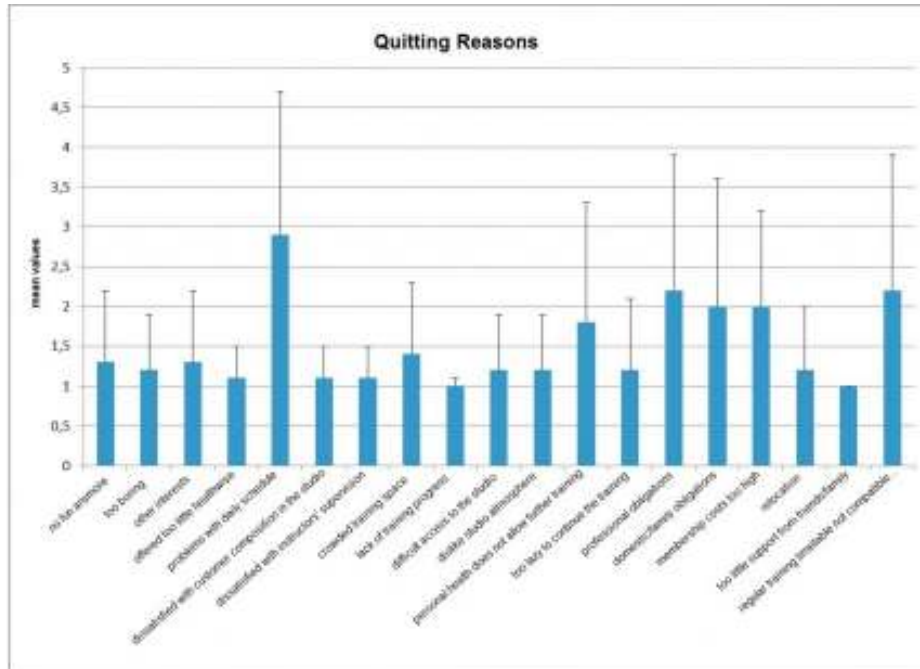


Figure 1. Mean values and standard deviations of quitting reasons

Importance of quitting reasons according to age categories

Table 3 shows the distribution characteristic values (Mean value, Median, Standard deviation) and the sample size differs according to the four age categories.

Table 3: Distribution characteristic values of the quitting reasons according to age categories

			Mean value	Median	SD	Quantity
Age category	up to 25 Years	No fun anymore	1,0	1,0	,0	20
	26-40 Years		1,2	1,0	,9	70
	41-55 Years		1,5	1,0	1,1	96
	> 55 Years		1,2	1,0	,7	37
Age category	up to 25 Years	Too boring	1,0	1,0	,0	20
	26-40 Years		1,2	1,0	,7	70
	41-55 Years		1,3	1,0	,9	96
	> 55 Years		1,0	1,0	,0	38
Age category	up to 25 Years	Other interests	1,5	1,0	1,4	20
	26-40 Years		1,1	1,0	,7	69
	41-55 Years		1,3	1,0	1,0	95
	> 55 Years		1,1	1,0	,6	38
Age category	up to 25 Years	Offered too little healthwise	1,0	1,0	,0	19
	26-40 Years		1,0	1,0	,2	69
	41-55 Years		1,1	1,0	,3	95
	> 55 Years		1,2	1,0	,7	38
Age category	up to 25 Years	Problems with daily schedule	3,0	4,0	1,8	20
	26-40 Years		3,4	4,0	1,6	70
	41-55 Years		2,9	3,0	1,9	96
	> 55 Years		1,7	1,0	1,4	38
Age category	up to 25 Years	Dissatisfied with customer composition in the studio	1,0	1,0	,0	20
	26-40 Years		1,1	1,0	,5	70
	41-55 Years		1,1	1,0	,4	95

	> 55 Years		1,1	1,0	,5	38
Age category	up to 25 Years	Dissatisfied with instructors supervision	1,0	1,0	,0	20
	26-40 Years		1,0	1,0	,2	69
	41-55 Years		1,1	1,0	,3	96
	> 55 Years		1,2	1,0	,8	38
Age category	up to 25 Years	Crowded training space	1,3	1,0	,6	20
	26-40 Years		1,3	1,0	,6	70
	41-55 Years		1,5	1,0	1,1	96
	> 55 Years		1,2	1,0	,6	38
Age category	up to 25 Years	Lack of training progress	1,0	1,0	,0	20
	26-40 Years		1,0	1,0	,2	70
	41-55 Years		1,0	1,0	,0	96
	> 55 Years		1,0	1,0	,0	38
Age category	up to 25 Years	Difficult access to the studio	1,0	1,0	,0	20
	26-40 Years		1,4	1,0	1,0	70
	41-55 Years		1,1	1,0	,6	96
	> 55 Years		1,0	1,0	,0	38
Age category	up to 25 Years	Dislike studio atmosphere	1,0	1,0	,0	20
	26-40 Years		1,2	1,0	,7	70
	41-55 Years		1,2	1,0	,7	96
	> 55 Years		1,2	1,0	,9	38
Age category	up to 25 Years	Personal health does not allow further training	1,0	1,0	,0	20
	26-40 Years		1,4	1,0	1,2	70
	41-55 Years		1,6	1,0	1,4	96
	> 55 Years		3,2	4,0	1,8	38
Age category	up to 25 Years	Too lazy to continue the training	1,0	1,0	,0	20
	26-40 Years		1,3	1,0	,9	70
	41-55 Years		1,3	1,0	1,0	96
	> 55 Years		1,2	1,0	,7	38
Age category	up to 25 Years	Professional obligations	3,4	4,0	1,7	20
	26-40 Years		2,3	1,0	1,7	70
	41-55 Years		2,2	1,0	1,7	96
	> 55 Years		1,4	1,0	1,1	38
Age category	up to 25 Years	domestic / family obligations	1,0	1,0	,0	20
	26-40 Years		2,7	2,0	1,8	70
	41-55 Years		2,0	1,0	1,6	96
	> 55 Years		1,2	1,0	,7	38
Age category	up to 25 Years	Membership costs too high	2,1	2,0	1,1	20
	26-40 Years		2,2	1,5	1,4	70
	41-55 Years		2,0	2,0	1,2	96
	> 55 Years		1,7	1,0	,9	38
Age category	up to 25 Years	Relocation	1,6	1,0	1,5	20
	26-40 Years		1,1	1,0	,7	70
	41-55 Years		1,2	1,0	,9	96
	> 55 Years		1,0	1,0	,0	38
Age category	up to 25 Years	Too little support form friends/family	1,0	1,0	,0	20
	26-40 Years		1,0	1,0	,0	70
	41-55 Years		1,0	1,0	,0	96
	> 55 Years		1,0	1,0	,0	38
Age category	up to 25 Years	Regular training timetable not compatible with my schedule	1,8	1,0	1,5	20
	26-40 Years		2,4	1,0	1,8	70
	41-55 Years		2,6	1,0	1,9	96
	> 55 Years		1,4	1,0	1,1	38

In Figure 2, the mean values and distributions of the quitting reasons according to age groups are shown as grouped bar graphs.

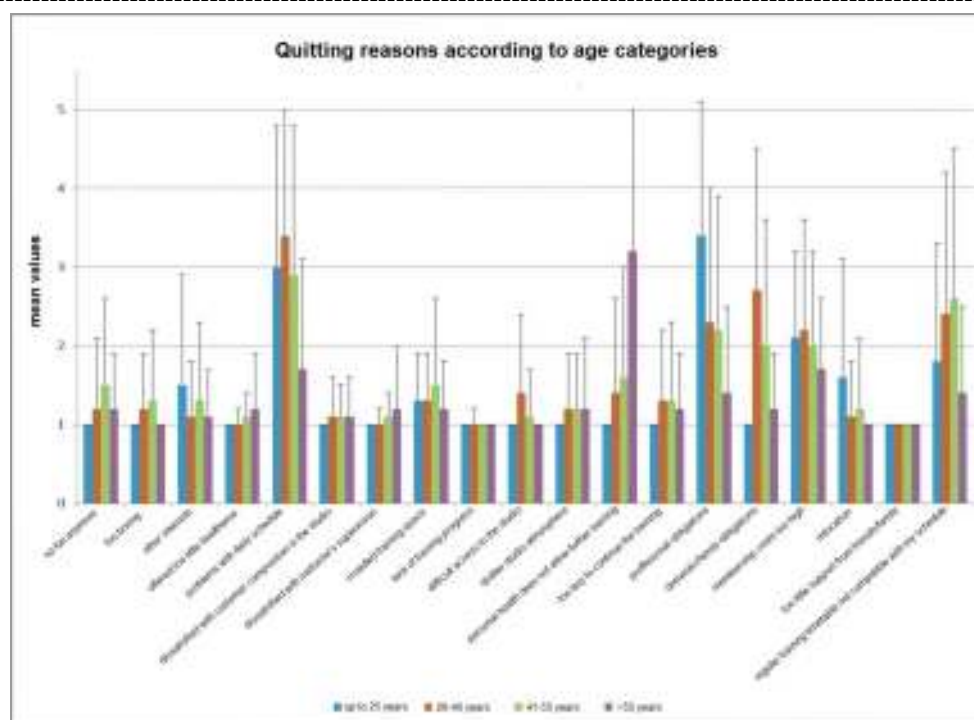


Figure 2. Quitting reasons according to age categories

Significance test of the correlations between quitting reasons and age

In Table 4, the correlation coefficients (product-moment correlations according to Pearson) of the evaluations of the quitting reasons are presented each time with the respective age:

Table 4. Correlations between quitting reasons and age

Correlations		
		age
No fun anymore	Pearson correlation	,108
	Sig. (bilateral)	,108
	N	223
Too boring	Pearson correlation	,016
	Sig. (bilateral)	,813
	N	224
Other interests	Pearson correlation	,000
	Sig. (bilateral)	,994
	N	222
Offered too little healthwise	Pearson correlation	,244**
	Sig. (bilateral)	,000
	N	221
Problems with my daily schedule	Pearson correlation	-,273**
	Sig. (bilateral)	,000
	N	224
Dissatisfied with customer composition in the studio	Pearson correlation	-,006
	Sig. (bilateral)	,932
	N	223
Dissatisfied with instructors' supervision	Pearson correlation	,162*
	Sig. (bilateral)	,015
	N	223
Crowded training space	Pearson correlation	,030
	Sig. (bilateral)	,660
	N	224
Lack of training progress	Pearson correlation	-,058
	Sig. (bilateral)	,385
	N	224
Difficult access to the studio	Pearson correlation	-,171*
	Sig. (bilateral)	,010
	N	224

Dislike studio atmosphere	Pearson correlation	,058
	Sig. (bilateral)	,390
	N	224
Personal health does not allow further training	Pearson correlation	,403**
	Sig. (bilateral)	,000
	N	224
Too lazy to continue the training	Pearson correlation	,046
	Sig. (bilateral)	,491
	N	224
Professional obligations	Pearson correlation	-,285**
	Sig. (bilateral)	,000
	N	224
domestic / family obligations	Pearson correlation	-,117
	Sig. (bilateral)	,081
	N	224
Membership costs too high	Pearson correlation	-,155*
	Sig. (bilateral)	,021
	N	224
relocation	Pearson correlation	-,121
	Sig. (bilateral)	,071
	N	224
Too little support form friends/family	Pearson correlation	^c
	Sig. (bilateral)	.
	N	224
Regular training timetable not compatible with my schedule	Pearson correlation	-,122
	Sig. (bilateral)	,068
	N	224
**. Correlation is significant by level 0,01 (bilateral).		
*. Correlation is significant by level 0,05 (bilateral).		
c. Cannot be calculated, since at least one of the variables is constant		

Discussion

Most of the quitting reasons have a mean value of 1 or close to 1, which means that the majority of respondents have chosen the answer "does not apply at all". In one case, where the item "too little support from friends/family" was chosen, the respondents have chosen uniformly the first response category; there is no variance in the answers.

The highest rating is clearly found at the quitting reason "Problems with daily schedule"; also here the distribution is obviously the largest. This question therefore shows the greatest heterogeneity in the respondent group. In five other items, mean values are around 2 (mean values between 1.8 and 2.2). These are in descending order the reasons: "professional obligations", "regular training timetable not compatible with my schedule", "domestic / family obligations", "membership costs too high", and "personal health does not allow further training". The quitting reasons that were chosen by the respondents to be of considerable importance mainly refer to personal time management and thus relate to the prioritization of other sectors of life and other obligations. It is striking that, with the exception of the membership costs, all studio conditions do not play any role, or at least a significant role, in the quitting decision. Of equal small importance are also personal reasons concerning motives and interests. As regards to health, it is striking that, although on the one hand the reason "personal health does not allow further training" appears relatively strong, on the other hand however the reason "offered too little healthwise" is practically not indicated.

The differentiation by age categories in these six main quitting reasons shows:

- The problems with daily schedule are less pronounced among 55-year-old respondents than in the other three age groups, and also the youngest group of respondents reported relatively strongly this reason.
- On the other hand, the two middle age groups clearly dominate the item "regular training timetable not compatible with my schedule". Here the younger respondents are also plainly reduced, albeit not as strongly as the oldest respondents.
- Rather surprising is the fact that the quitting reason "professional obligations" is clearly highlighted by the youngest respondents and decreases as age increases.
- On the contrary, the "domestic and family obligations" show that this reason is much more pronounced in middle age groups than among the youngest or oldest respondents.
- The quitting reason "Membership costs too high" shows only a slight difference in age, and it is least mentioned by the oldest respondent group.

- The quitting reason "Health does not allow any further training" is dominated, as expected, by respondents belonging to the oldest age category. The reason is markedly less pronounced in all other age groups and decreases monotonically the younger the respondents are.

In the correlations between the evaluations of quitting reasons and age, only weak up to very weak trends are shown with one exception. In the item "too little support by friends/family", no correlation can be calculated because this item is consistently rated "does not apply at all" and has no variance, so in the sample it is not a variable, but a constant. The only correlation in which the correlation coefficient is above .30, which therefore indicates at least a mean correlation strength, is the correlation of the age with the item "health does not permit further training". The correlation is here $r = .403$, which corresponds to r^2 of 0.162, thus a variance explained of 16.2%. This relation is highly significant with $p < .001$.

Also significant at a 0.01% level are the following three correlations, although the correlation intensity is less pronounced in them:

- "Professional obligations" as quitting reason correlates with $r = -.285$ (8.1% variance explained); with increasing age, this reason tends to decrease.
 - "Problems with daily schedule" correlates with $-.273$ (variance explained 7,5%), also here the quitting reason becomes less important as the age increases.
 - The quitting reason "offered too little healthwise" correlates with age positively with $r = .244$ (variance explained 6,0%); this quitting reason tends therefore to become increasingly important as age increases.
- Three further quitting reasons correlate, albeit weakly but significantly on the 5% level with the age:
- The statement "difficult access to the studio" presents a correlation of $r = -.171$ (variance explained 2,9%), so there is a verifiable, but also weak, trend that this reason becomes less important with increasing age.
 - "Dissatisfied with instructor's supervision" correlates slightly positively in the amount of $r = .162$ (variance explained 2,6%) with the age, thus shows the tendency to increase with increasing age.
 - The quitting reason "Membership costs too high" correlates with $r = -.155$ slightly negatively with the age (variance explained 2,4%). There is therefore a weak but not coincidental, correlation that this quitting reason is less important with increasing age.

Comparing the results of the descriptive statistics with the significance test on correlations, it should be noted that the quitting reasons "regular training timetable not compatible with my schedule" and "domestic/family obligations", although they show descriptive differences in age (relative to the age groups), these do not result in significant correlations, because here the dependence on age does not point monotonously in one direction, but in each case the oldest and the youngest respondent groups show a weaker manifestation, while the middle age groups are more accentuated.

Conversely, there are significant (although weak) relationships with age in the items "offered too little healthwise", "difficult access to the studio" and "dissatisfied with instructors supervision", although these three items are descriptive rather normal. In all three cases, these reasons are almost not indicated with mean values close to 1 and the differences between age categories are also slight. In this case, the significant correlations mean that the verifiable tendency differences in age are related to a very small "range" in the evaluation differences, which is rather meaningless in terms of content.

Conclusions

Overall, it is found that only a few of the quitting reasons offered in the survey are also indicated in significant frequency as important for the quitting decision.

With the exception of membership costs, these reasons have nothing to do with studio conditions, but rather, apart from the mentioned health problems, mainly address issues of time scheduling and prioritizing the training in relation to other areas of life.

Significant trends in the age dependency of the *relevant* quitting reasons can be verified in three reasons:

- Health problems as a quitting reason are significantly stronger the older the respondents are.
- "Professional obligations" and "regular training timetable not compatible with my schedule" as quitting reasons showed a significant, negative correlation with age, and thus become less important as age increases.

References

- Andrew, G.M., Oldridge, N.B., Parker, J.O., Cunningham, D.A., Rechnitzer, P.A., Jones, N.L., Buck, C., Kavanagh, T., Shepard, R.J., Sutton, J.R. (1981). Reasons for Dropout from Exercise Programs in Post- Coronary Patients. *Medicine and Science in Sports and Exercise*, 13 (3), 164-168.
- Brehm, W., Eberhardt, J. (1995). Drop-Out and adherence in Fitness-Studio. *Sports science*, 25 (2), 174-186.
- Brehm, W., Pahmeier, I. (1990). Dropping out or remaining; Breakpoints of a broad sports career and conditions of a withdrawal. *Spectrum of Sports Science* 2 (2), 33-56.
- Bruhn, M., Homburg, Ch. (Hrsg.). (2001). *Gabler Marketing Lexikon*. Wiesbaden: Gabler.
- Busch, R., Dögel, R., Unger, F. (2001). *Integrated marketing - strategy, organization, instruments (3rd edition)*. Wiesbaden: Gabler.

- Dishman, R. K. (1982). Compliance/Adherence in Health-Related Exercise. *Healthy Psychology*, 1, 237-267.
- Dishman, R.K. (1988). *Exercise Adherence –Its Impact on Public Health*. Champaign: Human Kinetics Books.
- Hönsel, F. (2005). Customer satisfaction. In Breuer, C., Thiel, A. (2005), *Handbook Sport management* (S. 343 – 362). Schorndorf: Hofmann.
- Homburg, Ch., Krohmer, H. (2008). The process of market research: definition of data collection, sample formation and questionnaire design. In Herrmann, A., Homburg, Ch., Klarmann, M. (2008). *Handbook Market research (3rd edition)*. (S. 21-51). Wiesbaden: Gabler.
- Kotler, P. (2000). *Marketing Management – The Millennium Edition*. Prentice Hall, Upper Saddle River, New Jersey
- Oldrige, N.B. (1977). What to Look for in an Exercise Leader. *Physician Sports Medicine*, 5, 85-88.
- Oldrige, N.B. (1979a). Compliance of Post Myocardial Infarction Patients to Exercise Programs. *Medicine and Science in Sports*, 11, (4), 373-375.
- Oldrige, N.B. (1979b). Compliance in Exercise Rehabilitation, In *Physical Sports Medicine*, 7, 94-103.
- Oldrige, N.B. (1981). *Dropout and Potential Compliance – Improving Strategies in Exercise Rehabilitations*. In Nagele, F., Montoye, H. (Ed.), *Exercise in Health and Disease*. Springfield.
- Oldrige, N.B. (1988). Compliance with exercise rehabilitation. In Dishman, R.K. (Ed.), *Exercise and Public Health*. (S. 283-304). Champaign: Human Kinetics Book.
- Oldrige, N.B., Jones, N.L. (1983). Improving Patient Compliance in Cardiac Rehabilitation: Effects of Written Agreement and Self-Monitoring. *Journal of Cardiac Rehabilitation*, 3, 257-262.
- Oldrige, N.B., Steiner, D.L. (1990). The Health Belief Model: Predicting Compliance and Dropout in Cardiac Rehabilitation. *Medicine and Science in Sports and Exercise*, 22 (5), 678-683.
- Pahmeier, I. (1994). Drop-out and adherence in recreational and health sport. *Favourable and unfavourable conditions for sports participation* 24 (2), 117-150.
- Rampf, J. (1999). *Drop-out and adherence in fitness sports. Favourable and unfavourable conditions for activities in the gym*. Hamburg: Cwalina-Verlag.
- Shepard, R.J., Cox, M. (1980). Some Characteristics of Participants in an Industrial Fitness Program. *Canadian Journal of Applied Sport Science*, 5 (2), 69-76.
- Siebrecht, P. (2004). *Customer satisfaction and customer loyalty. Measurement, implementation, management of success factors. With customer satisfaction and customer loyalty to economic success*. Frankfurt (Main): Peter Lang.
- Stauss, B., Seidel, W. (2007). *Complaint management. Dissatisfied customers as a profitable target group* (4th, fully revised edition). Munich: Karl Hanser.
- Ward, A., Morgan, W.P. (1984). Adherence Patterns of Healthy Men and Women Enrolled in Adult Exercise Program. *Journal of Cardiac Rehabilitation*, 4, 143-152
- Willis, J.D., Campell, L.F. (1992). *Exercise Psychology*. Champaign. Human Kinetics Publications.
- Zarotis, G. (1999). *Goal Fitness-Club: Motivation in Fitness-Sport*. Aachen: Meyer & Meyer.
- Zarotis G., Katsagolis A., Mitrotasios M. (2007). Free time and its alteration tendencies *Studies in Physical Culture and Tourism*, 14, (2), 179-183.
- Zarotis, G./ Tokarski, W. (2005). Gender-specific differences for motivation in health-oriented sports and fitness facilities. *Spectrum Free time*, 28, (2), 81-89.