

COACHING

Rudolf Jakhel. Started with karate in 1968, winner of several top trophies, e.g., vice-champion of Yugoslavia and the 3rd prize with the Yugoslav team at the EKU European Championship 1971. The first author was among the first proponents, who embarked on an initiative to study and teach karate to Western audiences based on scientific principles, advocating and actively engaging in "sportification" and "scientification" of karate (as instigated by Chojiro Tani's biomechanical approach in his "shukokai" concept by the end of the 1960s) with various articles, didactic papers, and research reports.

Project leader of an open, multidisciplinary development and research project "Rationalization in Karate", started in 1971 at the then Institute of Physical Education at the University of Technology in Aachen, Germany. Its goal was to apply sports science principles to karate. Its main interim report was a 1988 book called *Modern Sports Karate: Basics of Techniques and Tactics* (in German, translated into English, Slovenian, Czech, and Albanian).

Starting in 1996, he was the head and co-head of the Combat Sports Program, a base for establishing a Chair of Combat Sports at the Faculty of Sport, University of Ljubljana.

Today, a IX-degree (dan) black belt, he is mentoring the international network of Modern Sports Karate Associates and its Academy with the central office in Aachen, Germany. International coach and originator of several innovations in karate training, the main ones being: (a) kinematic typology of sports combat techniques, (b) retro additive teaching method, (c) situational progression in sparring, (d) multi-point rules of karate sports match, etc.

Recently also co-initiated and co-established an umbrella union of all karate styles in Slovenia, and chairing its supervisory board.

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Changes in participation motives in karate between 1970–1999

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Abstract:

The purpose of this study was to assess the participation motives of males and females to enroll in karate over a 30-year period. Subjects (n=9189) were male and female beginners aged 15–22 years from Slovenia, Germany, Luxembourg, and Czech Republic. Four major motivational dimensions may be distinguished: physiological, mental, spiritual and fighting skills. Over the period of study, physiological motives increased from 27.0% to 36.6%, mental aspects changed from 10.4% to 11.8%, spiritual decreased from 52.3% to 19.8%, and fighting skills changed from 6.2% to 28.5%. The results of this study seem to indicate that over time, beginners have ascribed much less abstract, unfounded contents to karate and expect to gain much more concrete, sport-like benefits from training.

Introduction

Karate became popular worldwide only after it had been introduced to Japan from Okinawa in 1922 during a demonstration initiated by the Japanese Ministry of Education [e.g. Draeger, Smith 1969; Funakoshi 1994]. In the most comprehensive historical account on karate to date, Bittmann [1999] reported that karate was first introduced to

Japan (Kyōtō) by Gichin Funakoshi in 1916 and that he was later selected to give the demonstration in 1922. In Japan, karate experienced a transformation that would eventually lead to its acceptance in the West. Funakoshi presented Okinawan karate to the Japanese in such a way that it became part of their martial tradition. He also shifted the emphasis from having to defend oneself in life-threatening situations, for which karate was used in Okinawa, to

one where it was practiced in the contexts of physical education and sport [Bittmann 1999; Draeger, Smith 1969; Funakoshi 1973, 1994]. This transformation led to its quick acceptance and popularity when karate was introduced in Europe (France) in the mid-1950's [Bittmann 1999; Jakhel 1988].

Reasons for taking up karate and other martial arts have been suggested to include health, self-development, recreation, fitness, spiritual education, self-defense, etc. [Draeger 1974; Hurst III 1993; Schmidt 1986; Wingate 1993]. At the time this study started (1970), there were few published scientific references on martial arts in general and karate in particular. For instance, Rasch and O'Connell [1963] assessed isometric strength of the hands, back and legs in male *karateka* and found them to be stronger in the legs (relative to body weight) than wrestlers. Vos and Binkhorst [1966] studied the force of the karate knife hand strike when breaking objects, while Kroll and Carlson [1967] found no differences between *karateka* and the general population in personality profile as assessed by Cattell's 16 PF questionnaire. In a follow-up study, Kroll and Crenshaw [1970] found *karateka* to be more group-independent than wrestlers, while they were more tense, conscientious and rule-bound than gymnasts.

Several authors have reported the effects of karate on its practitioners from different perspectives. For instance, aerobic fitness was suggested to result from training in karate forms (*kata*) [Shaw, Deutsch 1982; Stricevic *et al.* 1980]. Simulated karate matches require high energy expenditure [Baker, Bell 1990], while Imamura *et al.* [1996] recorded exercise heart rates in excess of 90% of predicted heart rate maximum after consecutive karate bouts.

The study of personality characteristics of *karateka* continued in the 1970's and 1980s [e.g. Duthie *et al.* 1978; Greene *et al.* 1974]. In general, the psychological effects of karate are suggested to be partially dependent on the instructor [Fuller 1988; Konzak, Boudreau 1984]: those who emphasize mental skills will also impart them on their students. Self-esteem as a result of karate training was found by Richman and Rehberg [1986], who reported that beginners scored lower on self-esteem than those involved in karate for a longer period of time. Contrary to this, Foster [1997] did not find any difference in self-esteem in beginners as a result of a quarter-long course in karate. The author suggested assessing the participants after several years of training.

Scant information is available on participation motives to engage in karate or other martial arts. Parents of children (7-16 years) were asked to indicate the reasons for enrolling them in karate [Boudreau *et al.* 1995]. Most parents indicated

psychological improvement as a motive for girls (64.7%). For instance, self-confidence scored highest among the psychological motives in girls (41.2%), while self-defense ranked second (47.1%). For boys, parents indicated that they had asked to join (45.9%) with psychological improvement ranking second (41.2%). Among the psychological reasons, self-discipline and self-confidence were considered as most important (30.6% each).

Twemlow *et al.* [1996] administered a questionnaire to all those (5-63 years) who had signed up for at least one month in karate to assess the factors that played a role for them to participate. Most of them rated self-defense as the most important reason for joining, followed by physical exercise and self-confidence. Of those who responded, 26.47% had previously been attacked physically. Of those younger than 18 years, 25.00% reported to have enrolled as a result of bullying in school.

Japanese males and females (15-70 years) enrolled in karate because of physical reasons (49.5%) [Bittmann 1999]. Of those who were primarily motivated by physical considerations, the majority (38.89%) enrolled to "train the body". Those interested in mental aspects of karate comprised 15.60% of the total respondents, while only 2.75% enrolled for self-defense. The purpose of this study, then, was to assess the participation motives of males and females to enroll in karate. A second purpose was to assess the changes over time in these reasons.

Methods

The subjects for this study ($n = 9189$) were male and female novices, aged 15–22 years, who started karate between 1970 and 1999. Table 1 shows the breakdown of the participants by sex and year group. They were recruited from member karate organizations in Slovenia, Germany, Luxembourg, and Czech Republic. Only those were included in the project, who actually took part in the first training hour of their initial karate course. Those who had been exposed to karate before were excluded from the sample.

Table 1. Breakdown of number of subjects by sex and years

Years	Men	Women
1970 – 1974	505	123
1975 – 1979	1259	481
1980 – 1984	799	241
1985 – 1989	639	227
1990 – 1994	1733	655
1995 – 1999	1721	752
Total	6710	2479

Table 2. Participation motives and their descriptions

Motives	Description
Health	Becoming generally healthier. Preserving health. Losing weight. Feeling good/better. Getting rid of stress.
Speed	Improving one's speed.
Strength	Improving one's strength.
Endurance	Improving one's endurance capacity.
Flexibility	Improving one's flexibility.
Coordination	Moving more smoothly, skilfully, with higher speed, with greater accuracy. Controlling, harmonizing one's movements. Ability to avoid unnecessary movements. Ability to react with proper movements as necessary.
Self-confidence	Feelings of ability to rely on oneself. Feeling more secure/less anxious. Ability to take more risks. Acquiring higher respect for oneself.
Self-control	Controlling one's state of mind/feelings/moods/temper. Ability to remain calm in critical situations. Ability to avoid stress. Ability to relax whenever necessary. Capacity to concentrate/respond correctly/efficiently.
Self-discipline	Developing stronger will/determination/persistence. Learning to be resolute.
Harmony of body and soul	Living in harmony of mind and physical potential. Coming to terms with oneself. Controlling one's physical powers/skills.
Inner powers	Finding the inner self. Feeling of inner powers/potential. Ability to act out of the body's center of gravity/hara.
Fighting prowess	Learning, how to hit properly, if necessary. Ability to defend oneself (better), if necessary. Becoming able to estimate potential danger properly and to prevent an attack on oneself. Becoming able to stand up against an attacker.
Other	Doing something meaningful. Being in good company. Having fun. I just like karate. Parents/father/mother sent me here. Want to do something new. Let me be surprised. Don't know, etc.

In 1970, when this investigation started, no studies had been done to assess the reasons people have to start karate practice. The first author (RJ) engaged in extensive discussions with beginners the year prior to the start of the study to gain insight into their motives for joining karate. In combination with the prevailing popular and scientific literature at the time [Draeger, Smith 1969; Herrigel 1953; Kroll, Carlson 1967; Kroll, Crenshaw 1970; Nishiyama, Brown 1960; Oyama 1965; Rasch, O'Connell 1963] twelve motives were identified as shown in Table 2, while the rest was subsumed under “other”.

Eleven of these factors may be grouped into the categories listed below (Table 2), with “health” as the first and “other” as the last of the dimensions constituting separate categories. Immediately after the first training hour of each new beginners' course, i.e., twice a year, the participating novices were asked to indicate their principal expectation as to the benefit of karate training. The question the subjects had to answer was: For what reason did you primarily start with karate training? They were allowed to specify only one reason. Those who gave more than one motive were asked once more to decide which one the most important was. All subjects answered the question in the presence of

their peers. The instructor in charge of the class asked the question and the responses were written down by an assistant. All answers were sent to the first author (RJ) after class.

To determine the differences in proportional distributions of motives over time and between sex, Pearson chi-squared tests were used. To determine any linear trends in proportional distributions of motives, Cochran chi-squared tests were employed. The level of significance was set at $\alpha=0.05$ for all analysis.

Results

Table 3 shows the proportional distribution of the participation motives for joining karate between 1970-1999. There was no difference in the proportions for health reasons across year groups in males and females (Pearson $\chi^2_5 = 8.053$, $p > 0.05$).

When comparing men and women in each year group, there was no difference between males ($n=3$) and females ($n = 5$) in health as a motive to join karate in the first five years (Pearson, $\chi^2_1 = 0.500$, $p > 0.05$). Between 1975 – 1979, more women ($n = 27$) than men ($n = 10$) were motivated by health

Table 3. Proportional distribution (%) of participation motives in karate beginners

Motives	1970 – 1974		1975 – 1979		1980 – 1984		1984 – 1989		1990 – 1994		1995 – 1999	
	Men	Women										
Health	37.50	62.50	27.03	72.97	50.00	50.00	42.86	57.14	26.67	73.33	23.40	76.60
Speed	75.00	25.00	56.52	43.48	70.97	29.03	73.08	26.92	78.64	21.36	79.07	20.93
Strength	90.53	9.47	78.33	21.67	86.11	13.89	83.76	16.24	79.12	20.88	75.86	24.14
Endurance	100.00	0.00	91.67	8.33	95.65	4.35	96.15	3.85	90.54	9.46	90.91	9.09
Flexibility	66.67	33.33	54.29	45.71	63.16	36.84	78.13	21.88	73.91	26.09	52.27	47.73
Coordination	70.00	30.00	56.28	43.72	75.33	24.67	77.12	22.88	72.90	27.11	72.36	27.64
Self-confidence	37.50	62.50	50.00	50.00	52.38	47.62	64.00	36.00	53.73	46.27	25.81	74.19
Self-discipline	93.18	6.82	85.25	14.75	88.53	11.47	83.02	16.98	83.82	16.18	77.31	22.69
Self-control	53.85	46.15	51.61	48.39	66.67	33.33	79.49	20.51	78.57	21.43	72.07	27.93
Harmony	84.38	15.62	75.37	24.63	74.50	25.50	70.29	29.71	65.31	34.69	67.63	32.37
Inner powers	77.55	22.45	68.08	31.92	77.69	22.31	65.75	34.25	70.37	29.63	70.79	29.21
Fighting skills	89.74	10.26	87.83	12.17	78.79	21.21	77.06	22.94	72.07	27.93	68.18	31.82
Other	45.46	54.54	10.53	89.47	74.29	25.71	60.00	40.00	76.74	23.26	90.63	9.37

considerations (Pearson $\chi^2_1 = 7.811$, $p = 0.005$). In the next five years (1980–1984), the same number of men ($n = 14$) and women ($n = 14$) was motivated by health. There again was no difference between men ($n=9$) and women ($n = 12$) between 1985–1989 in health as a participation motive to join karate (Pearson, $\chi^2_1 = 0.429$, $p > 0.05$). However, in the last ten years, more women than men were motivated by health: between 1990 – 1994, 33 females and 12 males mentioned health (Pearson $\chi^2_1 = 9.800$, $p = 0.002$) and between 1995–1999 there were 37 women and 11 men motivated by health (Pearson $\chi^2_1 = 13.298$, $p < 0.001$).

Physiological dimension

There was no difference among year groups in the proportion of speed as a motive (Pearson $\chi^2_5 = 6.389$, $p > 0.05$). However, there was a significant linear trend in the proportions of speed across the years. In both men and women, the proportions increased over the years (Cochran $\chi^2_1 = 4.221$, $p = 0.040$).

In the first ten years, there was no difference between men and women in the proportions of speed as a motive. Between 1970–1974 there were 6 men versus 2 women (Pearson $\chi^2_1 = 2.000$, $p > 0.05$) and between 1975–1979, 13 men versus 10 women (Pearson $\chi^2_1 = 0.391$, $p > 0.05$). The last 20 years, however, more men ascribed to speed as a motive. Between 1980 – 1984, 22 men versus 9 women (Pearson $\chi^2_1 = 5.452$, $p = 0.020$); between

1985 – 1989, 19 men versus 7 women (Pearson $\chi^2_1 = 5.538$, $p = 0.019$); between 1990 – 1994, 81 men versus 22 women (Pearson $\chi^2_1 = 33.796$, $p < 0.001$). Finally, in the last five years (1995 – 1999), there were 102 men and 27 women who chose speed as a motive (Pearson $\chi^2_1 = 43.605$, $p < 0.001$).

The proportions for strength as a motive were not equal across the years in men and women (Pearson $\chi^2_5 = 14.455$, $p = 0.013$). In the first five years (1970–1974) men were motivated by strength more than in subsequent years. For the women, they were motivated by strength more in the last five years (1995–1999) compared to the preceding years. There was a trend for a linear decrease in strength as a motive in males over the years, while the females showed an increase (Cochran $\chi^2_1 = 5.390$, $p = 0.020$). In each year group, there were more men motivated by strength than women (see table 4).

The proportions of endurance as a motive to join karate were equal over the years in both men and women (Pearson $\chi^2_1 = 1.619$, $p > 0.05$). In the first five years (1970–1974), there were no women who indicated to be motivated by endurance, but three men were. There were more men motivated by endurance than women in each subsequent year group (table 5).

The proportions of flexibility as a motive to join karate were equal over the years in both men and women (Pearson $\chi^2_5 = 9.803$, $p > 0.05$). When comparing males and females in each year group, the

Table 4. Frequency of strength as a motive to join karate in men and women

Years	Men	Women	χ^2_1	p
1970-1974	n = 86	n = 9	62.411	< 0.001
1975-1979	n = 206	n = 57	84.414	< 0.001
1980-1984	n = 124	n = 20	75.111	< 0.001
1985-1989	n = 98	n = 19	53.342	< 0.001
1990-1994	n = 216	n = 57	92.604	< 0.001
1995-1999	n = 198	n = 63	69.828	< 0.001

Table 5. Frequency of endurance as a motive to join karate in men and women

Years	Men	Women	χ^2_1	p
1975-1979	n = 22	n = 2	16.667	< 0.001
1980-1984	n = 22	n = 1	19.174	< 0.001
1985-1989	n = 25	n = 1	22.154	< 0.001
1990-1994	n = 67	n = 7	48.649	< 0.001
1995-1999	n = 50	n = 5	36.818	< 0.001

Table 6. Frequency of coordination as a motive to join karate in men and women

Years	Men	Women	χ^2_1	p
1970 - 1974	n = 42	n = 18	9.600	0.002
1980 - 1984	n = 133	n = 37	38.507	< 0.001
1985 - 1989	n = 118	n = 35	45.026	< 0.001
1990 - 1994	n = 277	n = 103	79.674	< 0.001
1995 - 999	n = 301	n = 115	83.163	< 0.001

first 15 years showed no difference between them in selecting flexibility as a motive. Between 1970–1974 there were four men and two women (Pearson $\chi^2_1 = 0.667$, $p > 0.05$) motivated by flexibility; between 1975–1979, 19 males and 16 females (Pearson $\chi^2_1 = 0.257$, $p > 0.05$); between 1980 – 1984, there were 12 men and 7 women (Pearson $\chi^2_1 = 1.316$, $p > 0.05$). Likewise, there was no difference between men ($n = 23$) and women ($n = 21$) in the last five years (1995–1999) (Pearson $\chi^2_1 = 0.091$, $p > 0.05$). However, more men (25 versus 7 for women) were motivated by flexibility between 1985 – 1989 (Pearson $\chi^2_1 = 10.125$, $p = 0.001$) as they were between 1990–1994 (51 men versus 18 women, Pearson $\chi^2_1 = 15.783$, $p < 0.001$).

The proportions of coordination as a motive in males and females were not equal across the years (Pearson $\chi^2_5 = 24.504$, $p < 0.001$). Coordination peaked as a motive between 1985–1989 in men (77.12%) and between 1975–1979 in women (43.72%). There was no difference between men ($n = 103$) and women ($n = 80$) in choosing coordination as a motive between 1975–1979 (Pearson $\chi^2_1 = 2.891$, $p > 0.05$). Table 6 displays the comparison of men and women regarding coordination as a motive to join karate.

Mental dimension

The proportions for self-confidence were not equal across years in men and women (Pearson ($\chi^2_5 = 15.757$, $p = 0.008$). Self-confidence was more of a motive in men (64.00%) between 1985 – 1989) than in other years. In women (74.19%), self-confidence was more of a participation motive between 1995–1999. There also was a weak linear trend in self-confidence over the years (Cochran $\chi^2_1 = 3.746$, $p = 0.053$), which was mostly due to the decrease found in women between 1970 – 1989.

No differences were found between men and women in self-confidence between 1970–1974 (3

men versus 5 women, Pearson $\chi^2_1 = 0.500$, $p > 0.05$), between 1975 – 1979 (10 men versus 10 women), 1980 – 1984 (11 men versus 10 women, Pearson $\chi^2_1 = 0.048$, $p > 0.05$), 1985 – 1989 (16 men versus 9 women, Pearson $\chi^2_1 = 1.960$, $p > 0.05$) and between 1990 – 1994 (36 men versus 31 women, Pearson $\chi^2_1 = 0.373$, $p > 0.05$). However, more women ($n = 46$) than men ($n = 16$) indicated self-confidence to be a participation motive between 1995 – 1999 (Pearson $\chi^2_1 = 14.516$, $p < 0.001$).

A similar pattern to self-confidence was apparent for self-control. The proportions of self-control were not equal over the years in both men and women (Pearson $\chi^2_5 = 12.369$, $p = 0.030$). The highest proportion in the males (79.49%) occurred between 1985 – 1989), and for the females (48.39%) between 1975–1979. There also was a linear trend for self-confidence (Cochran $\chi^2_1 = 5.771$, $p = 0.016$). It increased linearly from 1975 – 1989 in men and decreased in women between 1975 – 1994.

No differences between men and women were found in self-control in the first 15 years: between 1970 – 1974 (7 men versus 6 women, Pearson $\chi^2_1 = 0.077$, $p > 0.05$), 1975–1979 (16 men versus 15 women, Pearson $\chi^2_1 = 0.032$, $p > 0.05$) and 1980–1984 (16 men versus 8 women (Pearson $\chi^2_1 = 0.2667$, $p > 0.05$). In the last 15 years, however, more men indicated self-control to be a motive: between 1985–1989 (31 men versus 8 women, Pearson $\chi^2_1 = 13.564$, $p < 0.001$), 1990–1994 (88 men versus 24 women, Pearson $\chi^2_1 = 36.571$, $p < 0.001$) and 1995–1999 (Pearson $\chi^2_1 = 21.631$, $p < 0.001$).

There were no differences in the proportions of self-discipline as a participation motive across the years (Pearson $\chi^2_5 = 7.801$, $p > 0.05$). However, there was a linear trend apparent (Cochran $\chi^2_1 = 5.571$, $p = 0.018$), especially in the women: the lowest proportion was found between 1970–1974 and the highest between 1995–1999. More men indicated self-discipline to be the participation motive across

Table 7. Frequency of self-discipline as a motive to join karate in men and women

Years	Men	Women	χ^2_1	p
1970-1974	n = 41	n = 3	32.818	< 0.001
1975-1979	n = 104	n = 18	60.623	< 0.001
1980-1984	n = 54	n = 7	36.213	< 0.001
1985-1989	n = 44	n = 9	23.113	< 0.001
1990-1994	n = 114	n = 22	62.235	< 0.001
1995-1999	n = 92	n = 27	35.504	< 0.001

Table 8. Frequency of harmony as a motive to join karate in men and women

Years	Men	Women	χ^2_1	p
1970 – 1974	n = 189	n = 35	105.875	< 0.001
1975 – 1979	n = 407	n = 133	139.030	< 0.001
1980 – 1984	n = 187	n = 64	60.275	< 0.001
1985 – 1989	n = 123	n = 52	28.806	< 0.001
1990 – 1994	n = 209	n = 111	30.012	< 0.001
1995 – 1999	n = 211	n = 101	38.782	< 0.001

Table 9. Frequency of inner powers as a motive to join karate in men and women

Years	Men	Women	χ^2_1	p
1970 – 1974	n = 76	n = 22	29.755	< 0.001
1975 – 1979	n = 145	n = 68	27.836	< 0.001
1980 – 1984	n = 94	n = 27	37.099	< 0.001
1985 – 1989	n = 48	n = 25	7.247	< 0.001
1990 – 1994	n = 114	n = 48	26.889	< 0.001
1995 – 1999	n = 126	n = 52	30.764	< 0.001

all years (see table 7).

Spiritual dimension

There were significant differences in the proportions of harmony across the years in men and women (Pearson $\chi^2_5 = 31.141$, $p < 0.001$). The highest proportion in the men (84.38%) occurred between 1970–1974, while that in the women (34.69%), between 1990–1994.

There also was a significant linear trend (Cochran $\chi^2_1 = 25.946$, $p < 0.001$) in the proportion of harmony as a participation motive over the years. There was a linear increase from 15.63% (1970–1974) to 34.69% (1990–1994) in the women. In the men, there was a linear decrease after the first five years with the lowest proportion (65.31%) occurring between 1990–1994. More men indicated harmony to be a motive over the years (see table 8).

There were no differences in the proportions of inner powers in the past 30 years (Pearson $\chi^2_5 = 6.561$, $p > 0.05$). More men than women chose inner powers as the participation motive for joining karate between 1970–1999 (see table 9).

Fighting skills

The proportions of fighting skills were not equal across the years (Pearson $\chi^2_5 = 43.689$, $p < 0.001$). There also was a linear trend (Cochran $\chi^2_1 = 42.725$, $p < 0.001$) for fighting skills with a linear increase in

the men from 1975 onwards and from 1970 in the women. Consistently more men reported fighting skills to be the participation motive (see table 10).

Other

There were differences in the proportions of 'Other' over the years (Pearson $\chi^2_5 = 42.186$, $p < 0.001$). There also was a significant linear trend in the proportions of 'Other' (Cochran $\chi^2_1 = 25.450$, $p < 0.001$). A decrease occurred in the women from 1975 – 1999, while the men experienced an increase between 1985–1999.

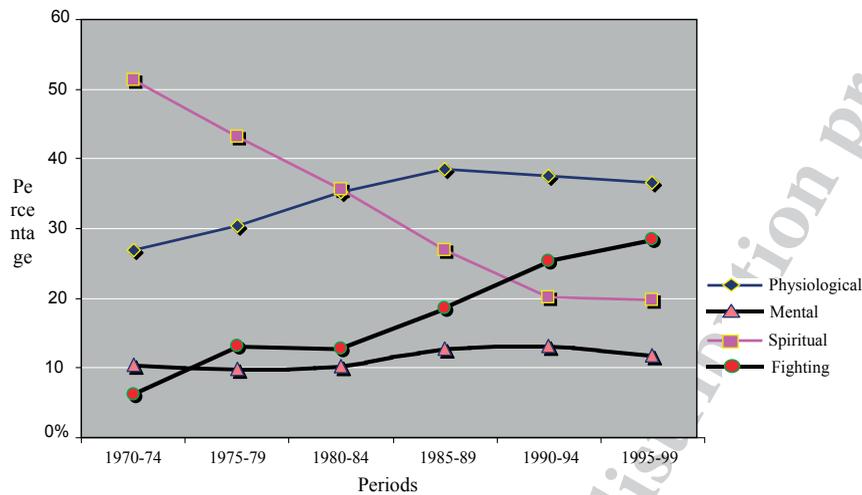
No differences were found between men and women in 'Other' as a motive between 1970–1974 (10 men versus 12 women, Pearson $\chi^2_1 = 0.182$, $p > 0.05$) and 1984–1989 (6 men versus 4 women, Pearson $\chi^2_1 = 0.400$, $p > 0.05$). Between 1975 – 1979, more women ($n = 17$) than men ($n = 2$) chose 'other' as a motive (Pearson $\chi^2_1 = 11.842$, $p = 0.001$). This was also the case between 1980–1984 (29 women versus 9 men, Pearson $\chi^2_1 = 8.257$, $p = 0.004$), 1990–1994 (33 women versus 10 men, Pearson $\chi^2_1 = 12.302$, $p < 0.001$) and 1995–1999 (20 women versus 3 men (Pearson $\chi^2_1 = 21.125$, $p < 0.001$)).

Changes in the participation motives over time are depicted in Figure 1 and are summarized as follows:

1) *Physiological dimension*, referring to expectations to improve physical capabilities,

Table 10. Frequency of fighting skills as a motive to join karate in men and women

Years	Men	Women	χ^2	p
1970 – 1974	n = 35	n = 4	24.641	< 0.001
1975 – 1979	n = 202	n = 28	131.635	< 0.001
1980 – 1984	n = 104	n = 28	43.758	< 0.001
1985 – 1989	n = 131	n = 39	49.788	< 0.001
1990 – 1994	n = 436	n = 169	117.833	< 0.001
1995 – 1999	n = 482	n = 225	93.421	< 0.001

**Figure 1.** Motives to Participate in Karate over Time

i.e., speed, strength, endurance, flexibility, and coordination.

2) *Mental dimension*, referring to the three aspects frequently indicated by the subjects, such as self-confidence, self-control, and self-discipline.

3) *Spiritual dimension*, referring to expected improvements in “harmony of body and mind” and “inner powers” as well as similar abstract notions.

4) *Fighting skills*, which refer to all the responses concerning expected improvements in physical fighting abilities.

“Health” is generally present when participating in sport and has therefore not been considered in this figure. The collective motive of “other”, which comprised a number of expectations not even necessarily related to sport at all, has also not been included.

Discussion

Participation motives are suggested to determine people’s reasons for engaging in a host of human behavioral expressions, ranging from alcohol abuse to food choice to exercise or sport participation. Those who were involved in sports were found to have a higher level of enjoyment and competence compared to those in fitness, who were primarily focused on developing their own bodies [Ingledeu, Markland 2008]. In martial arts and combat sports,

Vertonghen and Theeboom [2006] reported positive effects from participating, such as higher psychological well-being and lower violent behavior, although the results have been equivocal.

Similar to what was found by others [e.g. Bittmann 1999; Boudreau *et al.* 1995], health was mentioned as one of the motives to start karate. Interestingly, more women than men were motivated by health, especially in the last ten years of the study. Health has been mentioned by both men and women as one of the important reasons for engaging in physical activity in general [e.g. Duan 1985; Sidney *et al.* 1983]. It is not clear why more women chose health as a motive. The fitness boom of the last years of the 1990s may have contributed to this choice [Corbin, Lindsey 1997]. In the last ten years of the previous century, more women also chose ‘other’ as a participation motive. It may be worthwhile to explore what these ‘other’ reasons entail.

Physiological aspects are the more tangible components that may be distinguished in karate. Several authors have investigated the potential aerobic benefits of training karate forms [e.g. Shaw, Deutsch 1982; Stricevic *et al.* 1980], while other studies have focused on the specific physiological requirements of karate competition [e.g. Baker, Bell 1990; Beneke *et al.* 2004; Imamura *et al.* 1996; Ravier *et al.* 2009]. Interestingly, ‘endurance’ as a motive was not among the most frequently reported reasons for starting karate.

Columbus and Rice [1991] advocate a non-positivist approach in studying the oriental martial arts in the West, taking into account the cultural background of the (Western) practitioners. The daily practice in most karate associations around Europe, however, has shown to be much more down to earth. There, since the very beginning, karate has been trained and learned mainly in a pragmatic, Western manner. Indeed, the Oriental appearance – orthodox teaching methods, Japanese as the language of command, exotic robes, rites, and randomly selected words of wisdom – has been preserved even if only as an unavoidable legacy and legitimization of karate. However, the training process has mostly been oriented toward preparing students for various kinds of exhibitions of their fighting skills and sports combat competitions [Jakhel 1988].

Since starting with karate in 1968, the first author has been witnessing the discussion about the nature and contents of karate in the West [e.g. Förster 1986], first among individual karate styles, and later among the traditionalists and modernists [Jakhel 1996]. Although beginners may not have any understanding of or interest in such subtleties in the general karate context, the particular local atmospheres around some of the participating associations might have influenced a sort of natural selection of newcomers joining these particular associations [Bosch 2008].

In the second five-year period a sudden and noticeable increase in the number of female beginners occurred. This may be related to one of the participating associations in that timespan being a special women's group, with numerous members, at a German university. They belonged to the then rather strong feministic emancipatory movement. It is suggested that this may have had an effect on the registered preferences in expected gains in that period. It remains to be seen how karate participation motives will change in the near future with the emergence of the so-called de-sportization of combat sports and the rising popularity of no-holds barred contests as witnessed in mixed martial arts (MMA) [van Bottenburg, Heilbron 2006].

Conclusions

The results of this study seem to suggest that over time, newcomers have ascribed much less abstract, unfounded contents to karate and expect to gain much more concrete, sport-like benefits from training than three to four decades ago, such as physical conditioning and fighting skills. The increasing number of female beginners also indicates that karate is being perceived like any other sport. The results

seem to support a general observation about changes in the understanding of karate: it is becoming less and less restricted to the Japanese regional traditions while developing as a global sport.

However, further research is needed, especially in regard to the following question: Do the expectations as expressed by the participants indeed represent the true participation motives to join karate, or is the acquisition of fighting skills always the ultimate, real and true reason for starting karate training? Also, it is noteworthy that no clear-cut expectation to pursue a sports combat career in karate was ever mentioned, i.e., striving to win in competitions, although some of the respondents later did become successful competitors. The initial choice of not indicating the pursuit of a sports career as a motive may be related to the students' concept of karate as a martial art. It was not until they started training that they might have come to realize that karate may also be practiced as a competitive physical activity, i.e., sport. More research is indicated to shed light on the general comprehension of karate among beginners. It is suggested for karate instructors to tailor the training sessions to the participation motives of the students to increase the likelihood of continued and prolonged participation.

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Zmiany w podstawowych motywach u początkujących w karate w latach 1970-1999

Słowa kluczowe: karate, trening, fizyczny, mentalny, duchowy, walka

Streszczenie

Dostępne informacje dotyczące motywów uczestnictwa i zaangażowania się w karate oraz inne sztuki walki są dosyć nieliczne. Pierwszym celem badania było określenie motywów uczestnictwa mężczyzn i kobiet w zajęciach karate. Drugim celem była ocena zmian tych powodów na przestrzeni czasu.

Metody

Podmiotem badania (n = 9189), były osoby płci męskiej i żeńskiej, w wieku 15-22, początkujący, którzy ćwiczyli karate w latach 1970-1999 w Słowenii, Niemczech, Luksemburgu i Czechach. W projekcie zostały uwzględnione tylko te osoby, które rzeczywiście wzięły udział w pierwszej godzinie szkolenia początkowego kursu karate. Niezwłocznie po pierwszych godzinach nowego kursu dla początkujących (dwa razy w roku) uczestników poproszono o wskazanie głównego oczekiwania co do korzyści ze szkolenia karate.

Rezultaty

Mogą być wyodrębnione cztery główne wymiary motywacyjne.

(1) Fizjologiczny, odnoszący się do motywów takich jak:

szybkość, siła, wytrzymałość, elastyczność i koordynacja, który wzrósł z 27,0% do 36,6%, osiągając szczyt 38,5% w latach 1985-1989.

(2) Umysłowy, odwołujący się do wiary w siebie, samokontroli i samodyscypliny, zmienił się z 10,4% do 11,8%.

(3) Duchowy, np. harmonii ciała i duszy i sił wewnętrznych, spadł z 52,3% do 19,8%.

(4) Umiejętności walki - zmienił się z 6,2% do 28,5%; dla kobiety zmienił się z 3,3% do 29,9%, a dla mężczyzn z 6,0% do 28,0%.

Omówienie

Istnieje wiele motywów determinujących przyczyny zaangażowania się w wiele ludzkich zachowań - począwszy od nadużywania alkoholu, poprzez wybór żywności, ćwiczeń lub udziału w sporcie. To, jak motywy udziału w zajęciach karate zmieniają się, okaże się w najbliższej przyszłości.

Wnioski

Wyniki badań wydają się wskazywać, że z czasem adepci sztuk walki zaczynają przypisywać im o wiele mniej abstrakcyjne znaczenie i oczekują uzyskania bardziej konkretnych, sportowych korzyści z treningu niż 30-40 lat temu, takich jak kondycja fizyczna i umiejętności walki.