The development of Japanese marathon runners

Akio Usami

"The author here illustrates the elements that characterize marathon training in Japan; many of these are directly connected to the particular upbringing and environment of Japanese athletes. He also compares the training schedules he followed in 1970, when he achieved his personal best, 2:10:37, to those followed by Takeyuki Nakayama, who placed second in the 1985 IAAF World Marathon Cup."

1. Introduction

Since their first appearance in the Olympic Marathon in 1912 at Antwerp, Japanese runners have consistently been a major force on the world marathon scene. In 1936, the Gold Medal was won for Japan by Korean born Kitei Son. In the 32 years following that victory, our athletes distinguished themselves by setting 5 World Best Performances and taking 4 other Olympic medals in the event, the top placing by a native Japanese runner being Kenji Kimihara’s 1968 Silver Medal. Since then, runners such as Toshihiko Seko, Shigeru and Takeshi Soh, Taisuki Kodama and Takeyuki Nakayama have turned in many of the world’s all-time best performances and scored victories in most of the world’s top races.

Of all the athletic events, the Men’s Marathon is certainly Japan’s strongest and from the public’s point of view, the most popular. Women’s long distance running is also growing in popularity. Each year Japan is the host for many of the world’s top long distance events for men and women, including international marathons, international races at other distances such as 25 and
30 kilometers and long distance road relays or *Ekidens*. These events attract strong support from the public, the media and sponsors and are usually attended by top athletes from around the world. The tradition of success and public support is so strong that a number of athletes, the most notable being 1987 World Champion Douglas Wakihuri (KEN), have spent time training in Japan.

The purpose of this article is to make considered observations and an analysis of the success of Japanese marathon runners. To do this I will present the factors which, in my opinion, are most important, make a brief overview of the competition and training cycles for marathon runners in Japan and give some specific information on the life and training of runners, including some information taken from my own schedules in 1970 when I achieved my personal best time of 2:10:37 (the third fastest in the world that year) and from those of Nakayama in 1985 (when he led Japan to a second place finish in the IAAF World Marathon Cup by placing second in the individual race).

2. Factors behind the success of Japanese marathon runners

Among the main reasons as to why Japanese runners have advanced at the marathon distance is the fact that it is rare for people in our country to understand sports, including athletics. This situation has been an advantage for our marathon runners as athletes are referred to experienced, knowledgeable specialists for coaching. The training skills and advice given by these experienced coaches has allowed the runners to get over anxiety about hard training and enabled them to improve their talents. Most coaches work at schools or major companies where the runners are able to train and take advice. Although there is no specific qualification required to work as a coach at these institutions, this system has helped to harness talents and develop them from a young age.

The climate and natural environment of Japan is also helpful. There are four clearly defined seasons and an abundance of mountains which act as a natural stimulant to the basic training schedule. The large variation between maximum and minimum temperatures helps to build the athletes' toughness and patience towards the pain of hard training. 70% of the mountains in Japan are located in national parkland and this environment provides a counter to the unwanted stress of the athletes' daily life. In addition to this, the natural physique of the Japanese people, inherited from their families, is ideal for long distance running. This combination of environment and genetics has proved very effective for the development of top class marathon runners.

From the psychological point of view, our marathon runners also have an advantage in that the Japanese people tend to accept and respect hard workers or people who make the effort to accomplish something difficult, such as becoming a top class marathon runner. The value of an accomplishment depends on the effort made to attain it. It is considered a humiliation for someone to give up in the middle of something. As marathon runners must carry on, both with their training to improve their physical and mental strength and in their races, this mentality is an aid to the athletes seeking success.
Finally, I would like to mention that foreign runners seem to have a great need for independence when they are training and this is accepted by their coaches. On the other hand, I feel that marathon runners need to have strict self control in order to reach the limits of their training. As Japanese runners are able to train at their school or company they are closer to their coaches in order to receive advice and encouragement. However, the mistaken belief that Japanese coaches interfere with the private lives of their runners is based on a misunderstanding.

3. Competition seasons in Japan

The season in which the major long distance races and Ekidens are held runs from November to March. Athletes have many opportunities to take part in road competitions from 5 km to 30 km in addition to marathons. Between April and October is the Track season. In general Japanese marathon runners take part in 1-3 marathons per year, a few other road races of various distances and a few track races (usually 5000, 10,000 and Steeplechase).

Top runners, whose target is the Olympic Games, are able to prepare specifically for their chosen meetings. However, there is a handicap for the second level athletes as they must compete in a large number of events in an effort to reach the top level. If anything, they tend to have too many opportunities to compete and work hard throughout the year without a lay-off.

4. Daily life of a Japanese marathon runner

Most top marathon runners in Japan belong to the athletics club of the company which employs them. Though the athletes have duties for the company normally they are assigned to departments which are not directly involved with heavy production. Training and competition schedules are proposed by the athlete’s coach to the athlete’s
managers and, providing there is no interference with their required duties, absences are approved. These absences are treated as paid holiday or in some cases as travel on business. In most cases travel expenses are met by the company athletic clubs.

The following is an example of a typical daily schedule for Shigeru Soh, personal best of 2:09:05, who works for the Asahi-Kasei Company.

6.00 — Rise
6.20/7.30 — Early morning training
8.00 — Breakfast
8.30/15.30 — Working hours (except Saturday and Sunday)
16.00/18.00 — Main training
19.00 — Dinner (This time is variable depending on the main training)
22.00 — Sleep

The number of companies which have adopted the system of free weekends has increased in the last 10 years. Because of this, training schedules have been changing somewhat to make use of this free time.

5. Yearly training cycle

A typical yearly training cycle for a marathon runner is based on the competitive seasons and contains four distinct periods: 1) the track season (including a conditioning period), 2) the road running season, 3 and 4) the transition periods between seasons. The there is a different purpose to the training schedules tackled by the runners in each of the periods.

Training units lasting from 7 days to 4 weeks within the season are planned in advance by the coaches and given to the athletes.

In addition to the normal daily training, marathon runners participate in special training camps which usually last about 7 days. The number of camps that a runner will attend in a year varies from company to company.

The following examples of the main types for training will help to illustrate the main training purpose of the respective periods.

5.1 Track Season

The contents of the training schedule in the track season are planned 1-2 months before the runners’ most important meeting of the season. The main objective of the schedule will be to achieve the runner’s personal best time at that meeting. The content of the schedules, including the distance run and the split times, in this period is adjusted to fit in with the next meeting, depending on the runner’s physical condition. The coaches and the run-

Gelindo Bordin (ITA), gold medallist in the marathon at the 1988 Olympic Games
ners record all details of the training which they have undertaken in a training diary to help to assess the athlete’s condition. The diary is quite useful for the transition period before the next period. The following examples show the specific types of training normally employed by marathon runners:

**SPEED TRAINING IN THE TRACK SEASON**

a) Sprints
100m, 200m, 300m, 400m x 10 - 20 (15 sec, per 100m)
b) Long interval running
1000m - 3000m x 5 - 20 (2 min 40 sec average per 1000m)
c) Combined running (speed training)
1-200m + 1000m + 400m + 2000m + 200m x 3
2-100m + 200m + 300m + 400m + 500m + 400m + 300m + 200m 100m x 2
d) Time Trials (combined)

**ENDURANCE TRAINING IN THE TRACK SEASON**

a) 20km - 30km
b) 1-3 hours running
c) very long distance (up to 40 km)
d) cross-country (a few hours)

**RECOVERY PERIOD BETWEEN MEETINGS**

a) Jogging 60 mins
b) Completed rest day

5.2 Transition periods (season to season) including training camps

Between the two main competition periods are the two transition periods. During these periods it is important for the runners to aim their conditioning towards the training purpose of the upcoming competition period (Track - speed, Marathon - endurance). For this reason it is during these periods that most of the runners attend their training camps. Many coaches take this opportunity to get to know their runners’ condition in order to plan schedules for the following periods. Sometimes they spend all the day with the runners.

A training camp schedule for Takeyuki Nakayama (personal best 2:08:15) is shown in Table 1 (see the following page).

Nakayama completed this schedule at a summer camp in 1985, the year in which he achieved Japanese International status. At the camp, training took place three times a day.

At that stage it seems that endurance training was more important than speed training. His training, which could be called build-up training, was based around very long distance runs (30km - 50 km) every other day. During these runs his coach gave Nakayama split times and advice. Nakayama started each session with his club mates but usually left them far behind after the middle of the run. The target split time for each 5km of the run was decreased but it was easy for Nakayama to beat the times set for him.

Interval training has been adopted as good speed training for Nakayama. 10 x 1000m and 20 x 400m are very typical interval training sessions for Japanese runners, particularly at training camps. The time allowed for the 1000m efforts was planned to be up to 3 minutes. This speed was also comfortable for Nakayama.

The use of jogging as a method of recovery is thought to be one of the most important points of the training schedule. On the main training days, the sessions are indicated to the runners by their coaches. On the recovery
<table>
<thead>
<tr>
<th>Day</th>
<th>Early Morning</th>
<th>Morning/Main Training</th>
<th>Afternoon</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jogging (60 mins 10-14 km)</td>
<td>Interval 1000m x 10 * 1000m - 3 mins - 2 mins 35 secs * recovery 200m - 100m</td>
<td>Jogging 10-20 km</td>
<td>Pace goal for the first 5 in the set - 3:00, for the last 5 - 2:30</td>
</tr>
<tr>
<td>2</td>
<td>As above</td>
<td>40 km Result approx. 2 hours 10 minutes</td>
<td>As above</td>
<td>The time set for each 10 km of the run was gradually reduced. The last 5 km time is generally not set though he has run the distance under 14 minutes.</td>
</tr>
<tr>
<td>3</td>
<td>As above</td>
<td>Jogging * 10 - 20 km</td>
<td>As above</td>
<td>Each runner ran a different distance on this day because of conditioning. Nakayama had done the schedule as well as on the other days.</td>
</tr>
<tr>
<td>4</td>
<td>As above</td>
<td>30 km Result 1 hour 33 - 35 mins</td>
<td>As above</td>
<td>The purpose of the main session was endurance. However, it was faster than the previous long session. This could be called specific endurance.</td>
</tr>
<tr>
<td>5</td>
<td>As above</td>
<td>Interval 400 x 20 * 400m 65 sec - 55 sec * 200m recovery</td>
<td>As above</td>
<td>The times of the intervals were faster than marathon pace in order to develop a feel for the race.</td>
</tr>
<tr>
<td>6</td>
<td>16 km * finish time 48-50 mins</td>
<td>Jogging 10-20 km</td>
<td>16 km finish time 48-50 mins</td>
<td>The runners (incl. Nakayama) were given a harder run in the early morning when their condition was not very good. The same run was carried out in the evening for speed training. The distance is neither too long or too short.</td>
</tr>
<tr>
<td>7</td>
<td>Jogging 60 minutes</td>
<td>As above</td>
<td>Jogging 10-20 km</td>
<td>A rest day. The runners jogged in all sessions in order to recover from the fatigue with a little stimulation.</td>
</tr>
<tr>
<td>8</td>
<td>As above</td>
<td>50 km 2 hours 40 mins</td>
<td>As above</td>
<td>Very long distance was the last main session of this camp. Nakayama completed the distance in spite of his fatigue.</td>
</tr>
<tr>
<td>9</td>
<td>As above</td>
<td>* After breakfast moved to a different camp</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2 - TRAINING CAMP SCHEDULE OF USAMI (8 days, 1970)

<table>
<thead>
<tr>
<th>Day</th>
<th>Early Morning</th>
<th>Morning/Main Training</th>
<th>Afternoon</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Arrived at the camp</td>
<td></td>
<td>Jogging 65 mins (13-14 km)</td>
<td>Preparation training for the schedule starting the next day.</td>
</tr>
<tr>
<td>2</td>
<td>Jogging 30 mins (6.7 km)</td>
<td>Mountain course 25 km (around 90 mins)</td>
<td>Walking</td>
<td>Tried to use up/down of the mountain. Running on the hills, is to harden the body and develop strength in races.</td>
</tr>
<tr>
<td>3</td>
<td>As above</td>
<td>44 km * 2 hours 50 mins</td>
<td>Jogging 30 mins (5-6 km)</td>
<td>Tiredness from the past training still remained. However, the long distance was done to develop endurance.</td>
</tr>
<tr>
<td>4</td>
<td>As above</td>
<td>Jogging 70 mins around 18 km</td>
<td>As above</td>
<td>A rest day. Trying to recover from the fatigue as soon as possible for the next session.</td>
</tr>
<tr>
<td>5</td>
<td>Jogging 30 mins (6-7 km)</td>
<td>Mountain course 32 km (2 hours)</td>
<td>Walking</td>
<td>Working hard as much as possible to use the hills.</td>
</tr>
<tr>
<td>6</td>
<td>Walking 60 mins</td>
<td>18 km faster than jogging pace. 15 x 150 m sprints was included in the distance</td>
<td>Jogging 30 mins 5-6 km</td>
<td>The main training was carried out as speed training at the shorter distance.</td>
</tr>
<tr>
<td>7</td>
<td>Walking 40 mins</td>
<td>44 km 3 hours 02 mins</td>
<td>Jogging 30 mins (difference of distance exists depending on physical condition)</td>
<td>The result of the 40 km was not good. I could run entire distances but felt fatigue was at a peak at this time.</td>
</tr>
<tr>
<td>8</td>
<td>Jogging 60 mins</td>
<td>Returned home after breakfast</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
days the runners choose. The effective use of these days is therefore up to the runner.

The total distance covered in this schedule would be expected to be approximately 426 km (including jogging). On average the distance covered in a day and a week are 47.3 km and 353 km. If he had continued this schedule for a month, Nakayama’s total distance would have been about 1410 km. However, it would be impossible to continue that type of training for 1 month, although it would be easy for him to run 1000 km during a month in his usual situation.

A training camp schedule for Akio Usami is shown in Table 2 (see page 67).

This is a training camp schedule which I accomplished nearly 20 ago. The overall trend of my schedule appears similar to that of Nakayama. However, on average Nakayama covered about 15 km more per day (47.3 km vs. 32.4 km). It should also be noted that in what is probably the best indicator of speed for the marathon, the personal best at 10,000 metres, Nakayama’s 27:35.33 is more than a minute faster than my 28:37.6.

Note that at that time, weight training was not included in the general or camp schedules of marathon runners. Some coaches and runners thought that weight training might be effective for running, however, there was not enough evidence for them to accept its benefits. Instead we used pushups and situps several times per week.

5.3 Road Running/Marathon Season

Endurance training should be the most important point in this period.
There are examples of coaches who think that the endurance training alone is needed and that it will cover speed requirements. Examples of the types of training used within this period are as follows:

**ENDURANCE TRAINING**

a) Long distance  
Very long distance runs (up to 42.195 km)
b) 20km - 30km runs  
* split times should be faster as the run progresses  
c) Long hours running  
* up to 3-4 hours without a specific distance to cover  
d) Time trials

**SPEED TRAINING**

a) Long intervals  
1000m - 2000m x 20 - 30 (1000m times: 2 mins 40 - 3 mins)  
3000m - 5000m x 5 - 10  
b) Short intervals  
400m x 20 - 30 (60 - 70 sec)  
800m x 5 - 10 (as fast as possible)  
c) Cross Country  
* up hills and down hills  
d) Recovery between main training sessions  
Jogging (generally 60 minutes)  
* complete rest is not taken

**RECOVERY TRAINING BETWEEN MARATHONS**

The main objective of the period following a marathon is to regain weight and energy lost during a race as soon as possible. Generally the weight of a marathon runner would be expected to decrease 3-4 kg (depending on the weather conditions during the race) if the runner completes the 42.195 km. This loss of weight and energy means that hard training will have to be avoided for at least 7-10 days after the race. Jogging is the main training of this period. However, a long distance run (around 30 km) is done to assess when the runner has recovered from the marathon.

6. Conclusion

The characteristics of Japanese marathon athletes have been shaped by the influences of their upbringing and environment. In addition, the proper combination of the training elements which I have described, plus many others, has led to the production of top class marathon runners. If these influences and training elements, including weight training which is now widely practiced, are properly fitted to the individual characteristics of the athletes I think that it will be possible to produce top class runners in the future.