

# Analysis of Influencing Factors and Countermeasures of the Top 60 Female Students in the Second Micro-marathon of Henan Polytechnic University

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**Abstract:** *Marathon is a sport that tests people's perseverance very much. In the running, people should not only master the rhythm but also have sustained physical support. Many regions hold marathon races yearly, and many people participate in them. If you can't run a whole race due to physical fitness, the organizer will have a mini-marathon. A mini-marathon is a small marathon with different distances and lengths and different locations than a standard marathon. It is known from the data that the continuous decline of college students' physical health and poor health status has become a common problem faced by colleges and universities in China, and other physical quality indicators of college students cannot reach the basic "National physical health standards." The second mini-marathon of Henan Polytechnic University promoted the full development of sunshine sports and Hua Guang sports activities at Henan Polytechnic University. The mini marathon enhanced the students' perseverance and willpower, and improved their physical quality, especially their endurance quality. This paper mainly adopts the research methods of literature, questionnaire, field investigation, mathematical statistics, and logical analysis. It takes the top 60 female participants of the second mini-marathon of Henan Polytechnic University as the investigation objects. Affecting the Henan university science and technology of the second girl: the mini marathon sixty the intrinsic factors (personal situation, team motivation, sports knowledge, before the games, participating, and experience, sports recovery ability) and external factors (marathon route, sports equipment, music, logistics) to study the two aspects of analysis, To provide theoretical reference for girls who participate in the micro marathon to get better results and further improve the interest of college girls in sports, the following conclusions and suggestions are drawn.*

**Keywords:** *University, Miniature marathon, Influencing factors, The girl*

## 1. Introduction

Long-distance running was first introduced as a 4-mile and 6-mile run, and from the 40s of the 19th century to the 60s of the 19th century, it was gradually replaced by a 5,000-meter run and a 10,000-meter run. Micro-marathons, or mini-marathons, are about 5 kilometers long. Carrying out micro-marathons on campus is a healthy exercise advocated, and it is known from the data that the continuous decline in the physical health and poor health of college students in China have become a common problem faced by colleges and universities in China. To improve students' physical fitness, especially cardiopulmonary function, more and more colleges and universities have begun to hold micro-marathons to promote students' physical health.

It provides theoretical guidance for the organizers and co-organizers of the Henan Polytechnic University micro-marathon. It includes a reference value for them to improve the micro-marathon management mechanism, efficiently organize the event work, and highly integrate and utilize the advantages of various resources of the school. It provides theoretical value for better-holding micro-marathons in the future and encouraging college students to actively participate in the competition.

To improve the performance of girls in college micro-marathon, help students understand the factors that may affect the performance of the race before, during, and after the race and provide theoretical guidance for students to better master scientific training methods and better prepare for the competition, further promote students' enthusiasm for marathon sports, cultivate students' lifelong sports awareness, and improve students' health level [1-3].

## 2. Research results and analysis

### 2.1 Results and analysis of the top 60 girls in the second micro-marathon of Henan Polytechnic University

Table 1: Ranking of girls (N=60)

Ranking	Net timing score	Ranking	Net timing score
1	00:16:01	31	00:18:45
2	00:16:46	32	00:18:45
3	00:17:19	33	00:18:47
4	00:17:27	34	00:18:49
5	00:17:30	35	00:18:52
6	00:17:42	36	00:18:52
7	00:17:45	37	00:18:53
8	00:17:47	38	00:18:58
9	00:17:52	39	00:18:59
10	00:17:58	40	00:18:59
11	00:18:07	41	00:19:04
12	00:18:07	42	00:19:07
13	00:18:09	43	00:19:11
14	00:18:10	44	00:19:12
15	00:18:11	45	00:19:12
16	00:18:12	46	00:19:14
17	00:18:13	47	00:19:14
18	00:18:13	48	00:19:15
19	00:18:14	49	00:19:18
20	00:18:15	50	00:19:18
21	00:18:16	51	00:19:19
22	00:18:19	52	00:19:20
23	00:18:20	53	00:19:20
24	00:18:23	54	00:19:21
25	00:18:31	55	00:19:22
26	00:18:31	56	00:19:22
27	00:18:34	57	00:19:23
28	00:18:35	58	00:19:28
29	00:18:39	59	00:19:29
30	00:18:41	60	00:19:30

To better analyze the factors affecting the performance of girls participating in the Henan Polytechnic University Micro-marathon, the top 60 girls in the second micro-marathon of Henan Polytechnic University were collected and counted. The ranking and results of the full 60 girls are shown in Table 1.

As can be seen from Table 2, in the second micro-marathon with a course of 4000 meters, 2 of the top 60 girls had a net time of 16-17 points, accounting for 3.33% of the overall proportion; There were eight net timers between 17-18 minutes, accounting for 13.33% of the overall ratio; There were 30 net timers between 18-19 minutes, accounting for 50.00% of the overall ratio; There were 20 net timers between 19-20 minutes, accounting for 33.33% of the total.

Table 2: Distribution of girls' achievements(N=60)

Grade (points)	Number of people (people)	Proportion (%)
16-17	2	3.33
17-18	8	13.33
18-19	30	50.00
19-20	20	33.33

After reviewing the relevant information, it was learned that the standard for first-class athletes in the women's 3000m is 9 minutes and 50 seconds, the ideal for second-level athletes is 11 minutes and 00 seconds, and the ideal for third-level athletes is 12 minutes and 00 seconds; The ideal for a women's 5000m first-class athlete is 17 minutes 00 seconds, the ideal for a second-class athlete is 20 minutes 00 seconds, and the ideal for a third-class athlete is 23 minutes 00 seconds. The results of the top 60 female

students are mainly distributed between 18-20 points, a total of 50 people, accounting for 83.33% of the overall proportion, and their results have a large gap with the top 10 results, and there is more room for improvement.

## **2.2 Analysis of internal factors affecting the performance of the top 60 girls in the second mini-marathon of Henan Polytechnic University**

### **2.2.1 Personal situation analysis**

#### **2.2.1.1 Analysis of the primary condition of the personal constitution**

*Table 3: The age of the participating girls(N=60)*

Options	Subtotal (pcs)	Proportion (%)
Under 18 years of age	1	1.67
18-20 years old	17	28.33
20-22 years old	34	56.67
22-24 years old	7	11.67
24-26 years old	1	1.67
26 years of age or older	0	0

*Table 4: The height of the participating girls(N=60)*

Options	Subtotal (pcs)	Proportion (%)
150cm or less	0	0
150-160cm	6	10
160-170cm	46	76.67
170-180cm	8	13.33
180cm or more	0	0

*Table 5: The weight of the participating girls(N=60)*

Options	Subtotal (pcs)	Proportion (%)
45kg or less	2	3.33
45-50kg	11	18.33
50-55kg	38	63.33
55-60kg	9	15.00
60kg or more	0	0

As can be seen from Tables 3,4 and 5, the proportion of girls aged 20-22 is the highest, at 56.67%, while the proportion of students under 18 and over 26 years old is lower, at 1.67% and 0%, respectively. The top 60 girls had the highest ratio of height proportion between 160 and 170 cm, 76.67%, and the lowest proportion of students under 150 cm and above 180 cm, both at 0%. The top 60 girls weighed 50-55kg, with the highest balance at 63.33%, while students weighing less than 45kg and over 60kg had the lowest proportion at 3.33% and 0%, respectively [4-6].

Girls of middle age, height, and lightweight account for a large proportion, and after consulting the data, it can be seen that people with high size will have more excellent running resistance than shorter height, but people with low height will have smaller strides. The lower the weight, the smaller the weight required to lift from the ground for each step, and the energy consumption is relatively small, so the pace of running is relatively fast, the body fat rate of excellent marathon runners is shallow, and the body fat rate of women is about 15%. If you want to achieve better results in the mini-marathon, then weight loss is a must, and you also need daily exercise to accumulate a large amount of activity as a basis. But the weight is not lighter, the better the performance. To control the measure of training, when the body mass index is lower than 18.5, the body may not be able to withstand the intensity of training and risk of injury, which may also cause joint damage and poor body resistance. Therefore, to ensure a healthy diet and rest, moderate long-distance running exercises, promote the body's healthy internal circulation, and further improve their micro-marathon results. [1]

#### **2.2.1.2 Individual grade and primary analysis**

As can be seen from Table 6, the proportion of female students participating in the competition is the most significant proportion of first-year students, 48.33%, followed by female students in the sophomore year, with 35%, and the lowest proportion of female students in senior and graduate students, both at 3.33%.

*Table 6: Grade level of participating girls(N=60)*

Options	Subtotal (pcs)	Proportion (%)
Freshman	29	48.33
Sophomore	21	35
Junior	6	10
Senior	2	3.33
postgraduate students	2	3.33

First-year students are the most active year, have more free time, participate in school activities are also very busy, make good use of their spare time in the first year, can develop many good habits, also help students to exercise and network. When entering the sophomore and junior years, students have a general understanding of the school situation and subject knowledge, and there are many things that students need to be ready for at this time, such as level 4 and 6, computer level 2 certificate, Mandarin certificate and the exam that needs to be prepared for their major. Juniors are faced with the choice of entering graduate school and working, with less leisure time and less time to exercise and participate in physical activities. Senior students are required to participate in internships, and classes are basically stopped. At the same time, there is also a graduation thesis and other graduation-related matters, and there is little time to participate in the exercise.

We must actively mobilize the majority of students' interest in physical exercise, and cultivate the awareness and habits of lifelong sports of college students, especially senior students. Lack of physical education classes, the school has opened physical education classes in the freshman and sophomore years, and considering the academic and employment problems of juniors and seniors, there is no physical education class, sports exercise is significantly reduced, physical education class provides opportunities for students in the first and second years to play sports, and enter the junior and senior year without physical education classes, and compared to the first-and second-year student leisure time is reduced, They are also unwilling to find time to actively participate the exercise, resulting in a decline in physical fitness. As a result, most girls in their junior and senior years do not want to sign up for the mini-marathon or do not have time to prepare adequately for the race, so they do not achieve good results[7-11].

*Table 7: Majors studied by participating girls(N=60)*

Options	Subtotal (pcs)	Proportion (%)
Science	26	43.33
polytechnic	15	25
liberal arts	7	11.67
Economics/Management	16	26.67
Sports/Arts	5	8.33
Humanities/Society	6	10
else	8	13.33

As can be seen from Table 7, the proportion of female students majoring in science was the highest, 43.33%, followed by economics and management with 26.67%.

Henan Polytechnic University belongs to science and engineering colleges, so like science and engineering majors annual enrollment is more, the total number of colleges is also large, and the competition is based on the college as a team to participate, each college male and female report a team, each team of girls 20-30 people, so according to the survey, like a large number of colleges will conduct a selection competition before the competition registration, to avoid the phenomenon of too many registrations and unable to successfully register. Colleges with a small number of students may face insufficient enrolments and vacancies. After visiting and investigating, I learned that most of the girls were not confident, and after hearing about the mini-marathon, they were afraid that they would not be able to complete the race, so they gave up the idea of signing up. In this regard, our campus sports activities organizers should respect the subjective needs of students, encourage and induce students to actively participate in micro-marathons, and set rewards that meet students' needs based on students' actual conditions. Learning from the experience and lessons learned from the past long-distance running competitions, the setting of micro-marathon events should be scientific and humane, and when holding micro-marathon events, we should not set up registration quotas to prevent students from signing up and discourage students, but should actively improve the competition system and emergency plan to better improve students' interest in sports and enthusiasm for participation. [2]

### **2.2.1.3 Analysis of personal running frequency**

As can be seen from Table 8, "running several times a week" accounted for the highest proportion of

running frequency among participating girls, accounting for 53.33%, while "running every day" and "basically not running" accounted for a lower proportion of 6.67% and 5% respectively.

Most of the top performers have exercise to keep running, and keeping running exercise can improve the girls' physical resistance and enhance their cardiopulmonary function, so that their bodies can adapt to long-distance running. After regular running exercises, it will also exercise the psychological and physical quality of its participating girls, so that the bones, muscles, tendons and ligaments are stronger, and the sports burden of running micro-marathons is better withdrawn. Therefore, in order to improve the performance of the micro-marathon, it is necessary to maintain the habit of long-term running, and for students who have just started running exercise, they can gradually increase the course of long-distance running, and adjust it in time according to their own situation.

*Table 8: The frequency of running of the participating girls(N=60)*

Options	Subtotal (pcs)	Proportion (%)
Hardly running	3	5
Run every day	4	6.67
Run several times a week	32	53.33
Run several times a month	13	21.67
Not regular	8	13.33

#### **2.2.1.4 Individual pre-match anxiety analysis**

*Table 9: Pre-competition anxiety levels of participating girls(N=60)*

Options	Subtotal (pcs)	Proportion (%)
No anxiety	11	18.33
A little anxious	41	68.33
Very anxious	8	13.33

As can be seen from Table 9, the pre-competition anxiety level of the participating girls was "a little anxious", accounting for the largest proportion of 68.33%, while the proportion of "not anxious" and "a little anxious" was lower, 18.33% and 13.33% respectively.

Most high-achieving girls still have mood swings and nervousness before the race, and the students' nervousness before the mini-marathon is a psychological reaction caused by fear. However, moderate tension may be more conducive to student performance. Excessive tension before the competition will lead to unclear thinking of the participating students and affect the performance of competitive skills. If you want to maintain a good attitude and achieve excellent results, you must use good and scientific methods to overcome psychological tension.

#### **2.2.2 Motivation analysis**

There are 5 options for the top 60 female students participating in the second mini-marathon of Henan Polytechnic University with a motivation selection rate of more than 90%, namely "enrich campus life", "promote physical health", "improve sports ability", "improve learning efficiency" and "enhance physical fitness". There are two options with a selection rate of 50% or more, namely "Developing Endurance" and "Personal Hobbies." There are 2 options with a selection rate of 50% or less. They are "Make friends" and "Other".

From the motivation of the participating girls to participate in the second micro-marathon of Henan Polytechnic University, it can be seen that students take improving their physical fitness as the foundation of participating in the micro-marathon, and students are eager to enhance their perseverance and willpower through the micro-marathon, and can actively cope and deal with difficulties and setbacks in life.

#### **2.2.3 Analysis of the mastery of sports knowledge**

*Table 10: The girls' knowledge of sports(N=60)*

Mastery	Micro-marathon General Knowledge (%)	Long-distance running technical knowledge (%)	Post-race physical recovery knowledge (%)
Understand	18.33	15	20
Learn a little	63.33	48.33	58.33
Don't understand	18.33	36.67	21.67

Table 10 shows that only 18.03% of the girls who "know" the routine knowledge of the mini-marathon. The proportion of girls who "did not know" and "somewhat understood" the general knowledge of the mini-marathon was 81.66%. The selection rate of the top 60 girls in the long-distance running technique

was 49.18% "slightly understood", 36.07% "not understood", and 14.75% "understood".

Although most of the girls signed up for the second micro-marathon and achieved excellent results, they were not very familiar with the micro-marathon, did not know the meaning of the micro-marathon, the students' knowledge of long-distance running techniques was relatively lacking, and most of the students did not understand or did not understand enough about the post-race body recovery knowledge. Post-race stretching is also an essential part of the mini-marathon, and in order to achieve the desired micro-marathon results, first, students must master the correct running posture. Second, before taking students to warm up activities, it is necessary to teach students the knowledge of warming up before running, explain the harm of inactive body before running, and arouse students' attention to warming up before running. Third, ensure that the frequency of long-distance running exercise is maintained every week. Finally, students are given relaxation exercises after long-distance running and mini-marathons.

#### ***2.2.4 Analysis of pre-match preparation and sugar and water replenishment during the game***

The top 60 participating girls had the highest selection rate of "small preparation activities" in the pre-competition preparation situation, 68.33%, while the selection rates of "adequate preparation activities" and "no preparation activities" were lower, 21.67% and 10%, respectively. Most girls do not fully prepare for the start of the race, or even do not prepare for the activities, pre-run warm-up activities are also called pre-run activation, through the warm-up activities to improve muscle activity, increase blood flow, improve joint flexibility, stimulate the heart, lungs and nerves, help joints secrete bone fluid as soon as possible, reduce wear, let the body enter the exercise state in advance, and prepare for the next mini-marathon exercise. After visiting and investigating, it was found that not preparing for the game or doing a small amount of preparatory activities before the game will easily lead to adverse reactions and high heart rate; The body's muscles, joints, heart, lungs and other activities are not enough, resulting in low efficiency of running, the more you run, the more you feel tired, the slower you run, and the more tired you are and abandon running; Some girls also have running gas.

Henan Polytechnic University attaches great importance to the preparation activities before the second mini-marathon, under the leadership of the teachers and students of the School of Physical Education, the participants warmed up and prepared for the exercise with enthusiastic music, and the enthusiasm was high and the atmosphere was warm. However, some students inevitably had negative or even strike phenomena when following the teachers and students of the Sports Institute to do warm-up preparation activities, underestimating the importance of pre-match preparation activities. Therefore, we need to be more intense before the race and teach the role and importance of warm-up preparation.

Adequate preparation before exercise is an essential step to achieving excellent results. Adequate preparation activities can improve the excitability of the central nervous system of the participating students, regulate the poor pre-competition state, accelerate the brain response speed, coordinate with each other between the motor centers participating in the activity, and prepare for the physiological function to quickly reach the appropriate level during formal practice or competition. Through preparatory activities, the functional level of the cardiovascular system and respiratory system can be improved, the lung ventilation and cardiac output can be increased, the capillary network of myocardium and skeletal muscle can be expanded, and the working muscles can obtain more oxygen, thereby overcoming the physiological inertia of internal organs, shortening the time to enter the working state, and avoiding students' disgust and abandonment during the competition. It increases the student's body temperature, reduces muscle viscosity, increases muscle contraction and relaxation speed, increases muscle strength, increases muscle stretchability, flexibility and elasticity, thereby preventing sports injuries[5].

The top 60 participating girls had the highest selection rate of "small supplementation" in the pre-competition preparation, with 56.67%, and the selection rate of "no supplementation" and "sufficient supplementation" was "44.33%". 44.33% of students did not have proper sugar and water supplementation during the race, after a long time of running, muscle glycogen and blood sugar consumption will make students enter a state of fatigue, moderate sugar supplementation during exercise can increase blood sugar levels, reduce muscle glycogen consumption, improve running state, to properly intake of water, can not over-supplement water. After running a mini-marathon or running, do not stop immediately, it is best to continue walking for three to five minutes, wait until the whole body is relaxed, and stretch the body's ligaments in time, and must be maintained for a certain time. In order to improve performance, consistent exercise is also essential, and only consistent exercise will improve the level of exercise.

### ***2.2.5 Analysis of the participation experience***

Among the girls who won results and awards, the proportion of girls with micro-marathon and long-distance running experience was only slightly higher than that of girls with no micro-marathon and long-distance running experience. Among those with micro-marathon or long-distance running experience, the proportion of award winners with 1 or less micro-marathon or running experience, 2-3 times, 4-5 times, and 6 or more micro-marathon or long-distance running experience was 49.18%, 47.54%, 1.64% and 1.64%, respectively. The first prize winners who entered the top 10 have basically participated in the experience of 2 or more, and there is a significant difference between the number of experiences of the girls who won the first prize and the second and third prizes this year, and the investigation found that if you want to enter the top 10, you need to have at least one micro-marathon or long-distance running experience. To improve your micro-marathon performance, you need to actively participate in micro-marathon and long-distance running activities, exercise your mind, accumulate experience for the next race, and prepare yourself for excellent results. [7]

### ***2.2.6 Analysis of adaptive capacity for exercise recovery***

#### ***2.2.6.1 Analysis of the immediate reaction situation after the game***

The top 60 participating girls had the highest selection rate of "very severe dyspnea or fatigue" immediately after the competition, 43.33%, 38.33%, 8.33% and 6.67% of "severe dyspnea or fatigue", and 3.33% of "moderate dyspnea or fatigue", respectively. Micro-marathons are heavy-duty sports, in which many muscle groups of the body are involved in the exercise, resulting in the depletion of physical functions. Therefore, it is necessary to restore the muscular system after training. Therefore, to quickly restore physical function, students should recover muscle fatigue in time after the mini-marathon. The School of Physical Education of Henan Polytechnic University also has a rehabilitation group for students who have finished running to carry out rehabilitation movements, generally using the thigh massage of the foot on the back for relaxation and recovery, and when conditions permit, it will also use a foam roller for targeted massage.

For most students who lack physical activity, timely recovery after the game is even more important. Most of the students' immediate reactions after the race are severe and very severe dyspnea and fatigue, so they will relax in the form of long, slow breathing after the race. Scientific and reasonable diet is also very important, students are consumed a lot of energy after high-load competitions, and must supplement enough nutrition after the competition.

#### ***2.2.6.2 Analysis of the recovery situation for a long time after the game***

Among the top 60 girls in the post-competition recovery, the selection rate of "basic recovery in 1-3 days" was the highest, with 46.67%, the selection rate of "basic recovery within 1 day" and "recovery in more than 3 days" was 28.33% and 23.33%, respectively, and the selection rate of "no obvious response from the body" was 1.67%.

The micro-marathon is physically and psychologically consumed by students, which also makes the load of students during the race invisibly increasing, and the degree of physical fatigue of participating students will also increase. If the fatigue accumulated in the mini-marathon cannot be recovered in time, it is difficult to ensure the continuity of the subsequent long-distance running exercise or exercise, which will lead to a decline in training level. Exercise recovery is a very necessary component of middle and long-distance running training, in order to prevent delayed muscle soreness from affecting students' daily exercise after the race, students should pay attention to the importance of sports recovery. Most students do not care about the recovery of the body in daily exercise, according to the autonomy to complete the set goals, sometimes even ignore the recovery of fatigue, thinking that as long as the rest after exercise can relieve fatigue. Such exercise methods are extremely passive and unscientific, and it is difficult to ensure high-intensity and heavy-load exercise, which is very detrimental to the improvement of students' micro-marathon and long-distance running performance.

### ***2.3 Analysis of external factors affecting the performance of the top 60 girls in the second micro-marathon of Henan Polytechnic University***

#### ***2.3.1 Analysis of the setting of the marathon route***

##### ***2.3.1.1 Familiarization of the race route with situation analysis***

Among the top 60 participating girls' familiarity with the competition route, the choice rate of "somewhat familiar" was the highest, at 85%, and the selection rate of "unfamiliar" and "familiar" was

8.33% and 6.67% respectively.

The design of the micro-marathon race route has a lot of flexibility, with the campus as the basic setting of the track, so there are many subjective and objective factors on the micro-marathon track will have a certain impact on the athletes' performance of the competition, students want to achieve satisfactory results in the campus micro-marathon race, need to effectively investigate the route, familiar with the route. The higher the familiarity, the better the game.

### ***2.3.1.2 Analysis of the pavement and section of the track***

Among the top 60 girls in the competition, the selection rate of "affected by road surface" and "affected by road section (curve)" was the highest, with 75%, "affected by road section (straight)" at 5%, and "not affected by road surface" and "not affected by road section" at 24% and 20% respectively.

Campus micro-marathon is not like short distance running, is a fixed track, the flexibility of route design also reflects the particularity of the route, students will encounter uneven road surface, curves, uphill and other sections during the race, for students affected by the road surface or road section in the race, these will undoubtedly increase the physical and psychological burden on students, will affect the performance of student micro-marathon to a certain extent. Therefore, in order to avoid the negative impact of road sections and road surfaces, so as to improve the performance of the mini-marathon, students need to be familiar with the route, proficient in coping with the various road surfaces and road sections that appear in the race, and it is necessary to carry out targeted training for weak problems. Students should actively adjust their emotions in the competition, use or overcome objective factors, and improve students' adaptability to different race routes to help them achieve good results.

### ***2.3.2 Analysis of sports equipment situation***

Among the top 60 participating girls, the choice rate of "ordinary sports shoes and clothing" was the highest, at 58.33%, the selection rate of "professional running shoes and clothing" and "casual shoes and clothing" was 16.67% and "15%", respectively, and the selection rate of "do not care about sports equipment" was 10%.

The vast majority of girls who have achieved results will be more concerned about sports equipment during sports, a small number of students ignore sports equipment, and most students do not care whether sports equipment is professional, while participating in the mini-marathon, good sports equipment will also have a certain impact on students' performance in the competition. In addition to active warm-up activities, wearing professional sports equipment can also prevent sports injuries. Before the micro-marathon, prepare suitable sports shoes and sportswear, and choose the shoes you usually wear to exercise, which will be more suitable and will not cause a run-in. High-performance sportswear fabrics can not only maximize the comfort of sportswear, but also reduce the risk of accidental injury or muscle damage to reduce friction and resistance. The sweat-wicking function and breathability of professional sportswear are also better, making it comfortable in micro-marathon. The design of sneakers will also be different from ordinary shoes, which can reduce the pressure on the knees when running, and professional sneakers will have shock absorption and anti-slip, which plays a certain role in protecting the feet [11].

### ***2.3.3 Logistics situation analysis***

In order to ensure the smooth progress of the second micro-marathon of Henan Polytechnic University, the logistics office planned and prepared in advance according to the deployment of the school, made every effort to do a good job in the logistics support of the marathon, repaired and rectified the track in the school, cleaned the roads, sidewalks and shoulders along the route, provided timely and effective medical and health services, ensured that medical accidents were treated in time during the race, and ensured that no delayed treatment of the injured and sick occurred, providing an effective guarantee for the successful holding of the second micro-marathon of Henan Polytechnic University. On the day of the competition, volunteers not only actively maintained order, but also closely observed the status of the participating students. The school also set up rest stations and provided water and porridge as supplies for the participating students.

Reliable logistics support provides a good competition area environment for the students participating in the second micro-marathon of Henan Polytechnic University, provides a safe competition venue for the participating students, and provides a reassuring competition venue guarantee for the participating students, so that the students can concentrate and compete without distractions.



### **3. Research on countermeasures to improve the performance of girls in the micro-marathon of Henan Polytechnic University**

#### ***3.1 Cultivate students' habits of long-distance running and mini-marathon exercise***

If you want to improve the performance of the micro-marathon, the basic link of accumulating the experience of the micro-marathon in the daily long-distance running exercise is indispensable, and the school needs to pay attention to cultivating students' interest in the micro-marathon in the daily physical education class, so as to develop the habit of long-distance running exercise, and also need physical education teachers to use a variety of teaching methods and sports forms to stimulate students' interest in long-distance running and micro-marathon, so that students can gain a sense of achievement and happiness in long-distance running, and cultivate students' ability to carry out long-distance running and micro-marathon exercise. So that students can actively participate in long-distance running and micro-marathon exercise in their leisure time, and slowly form a love for long-distance running and micro-marathon, and adhere to long-distance running and micro-marathon exercise.

#### ***3.2 Encourage the development of school mini-marathon clubs***

In order to enrich the spare time life of Henan Polytechnic University students and improve their physical fitness, I believe that the school should encourage the development of micro-marathon clubs, scientifically and systematically cultivate students' interest in micro-marathon sports, promote students' all-round development, enrich the campus cultural life of Henan Polytechnic University students, build a healthy and harmonious atmosphere, enhance students' willpower, and let more students participate in micro-marathon sports. The micro-marathon club should be based on the activities carried out in the campus of Henan Polytechnic University, and the micro-marathon club activities should make full use of extracurricular time, and invite teachers from relevant majors of the Institute of Physical Education as the instructors of the club to ensure the systematic and scientific nature of the club. After the establishment of the micro-marathon club, it is necessary to do a good job in publicity and use a variety of channels to publicize the activities of the micro-marathon club. Adhere to the concept of "people-oriented", fully tap students' inherent potential in sports, and develop students' ability in micro-marathon.

#### ***3.3 Teach scientific and systematic techniques for long-distance running and micro-marathons***

Long-term wrong long-distance running or micro-marathon techniques can cause physical discomfort, such as physical damage to bones and muscles and psychological aversion to running. To improve your micro-marathon performance, the right micro-marathon technique will allow students to do more with less in a mini-marathon. Therefore, it is necessary to teach students scientific and systematic technical methods of long-distance running and micro-marathon.

#### ***3.4 Actively promote the culture of campus micro-marathons***

After visiting and investigating, it was found that some students were not clear about the development of Henan Polytechnic University micro-marathon, and even most students did not understand the difference between micro-marathon and marathon, campus micro-marathon as the largest single student event of Henan Polytechnic University since the outbreak of the epidemic, should actively promote campus micro-marathon, let students learn more about campus micro-marathon sports culture, learn the spirit and value of campus micro-marathon, etc. This requires not only the publicity of the school micro-marathon organizer, but also the WeChat public account of Henan Polytechnic University, the school's official website and the school's radio station to actively promote the campus micro-marathon. The school can teach the students of Henan Polytechnic University the culture and value of marathon sports by inviting famous people from the marathon class to give lectures to students.

### **4. Conclusions**

#### ***4.1 The level of micro-marathon exercise of girls in the second mini-marathon of Henan Polytechnic University is generally not high***

Most of the students participated in the second micro-marathon event out of motivation to enrich campus life, improve learning efficiency and promote physical and mental health, and the number of

Henan Polytechnic University athletics team and professional long-distance runners was small, and most of the participating students had experience in marathon events of 1 time or less, and lacked competition experience. In order to improve the level of micro-marathon sports and achieve better results, schools need to respect the laws of education, deepen the integration of sports and education, strengthen the management of the training process, improve the learning and training guarantee system, continuously improve students' sports skills, competitive level and academic level, and promote students' all-round growth into talents.

***4.2 The girls of the second mini-marathon of Henan Polytechnic University have less training time, and the frequency of daily exercise and running is not high***

Most students think that the state of life after entering the university is much more relaxed from mentality to body, and after the overall state of life becomes lazy, the sense of movement is weakened. As the grade increases, the academic pressure of students gradually increases, not only to study this professional knowledge, but also to obtain other certificates and prepare for other subjects in their spare time. Students will think that physical exercise will take up their study time and affect their own learning progress, so the daily exercise and running are very small.

***4.3 The girls of the second mini-marathon of Henan Polytechnic University lacked knowledge of sports***

Most students do not pay attention to the preparation activities before exercise, the running method during sports, and do not master the basic rehabilitation ability after exercise. The most important thing to strengthen the physical exercise of college students is undoubtedly that colleges and universities need to strengthen the guidance of students, so that students can establish correct sports purposes and cultivate positive sports awareness.

## **5. Suggestion**

### ***5.1 In terms of intrinsic factors***

Seniors have less leisure time, coupled with no physical education classes, they are busy with their studies, employment and graduation matters, and have little time to exercise and participate in sports activities. Schools and physical education teachers should be good at using curriculum resources and students' psychology to fully cultivate students' interest in long-distance running and micro-marathons, and promote students to develop lifelong sports awareness and habits. Relevant policies have been introduced to encourage senior students to actively participate in long-distance running.

The second mini-marathon of Henan Polytechnic University is set up in the South Campus, and if students from the North Campus sign up for the competition, it will require more energy, time and other efforts, so fewer students in the North Campus have registered for the competition and obtained valid rankings. Schools should properly handle the way the North Campus participates in the competition and promote the enthusiasm of the North Campus students to participate.

Students have little understanding of micro-marathon and long-distance running techniques and post-sports recovery knowledge, and do not have a scientific, systematic and comprehensive understanding of micro-marathon technology and post-exercise recovery knowledge. Therefore, it will easily cause certain damage to the body in daily training and even competitions. The right micro-marathon technique and sports recovery training will enable students to achieve more with less in the mini-marathon. Schools need to teach students scientific and systematic long-distance running and micro-marathon techniques through physical education classes, WeChat public accounts and lectures.

Most students have pre-race anxiety, because they are afraid of the mileage of the mini-marathon or worry that they will not be able to run, resulting in large fluctuations in their pre-race mentality, and excessive tension is not conducive to students' performance in the micro-marathon. It is necessary for the organizer and the warm-up team of the Sports Institute to guide students to relieve excessive tension and anxiety before the game and help students participate in the competition with a good and moderate attitude.

### 5.2 In terms of external factors

Students must first have a clear understanding of the route and environment of the competition, and freshmen or students who are not familiar with the campus need to investigate the route and familiarize themselves with the route. The more familiar you are with the race route, the better it is for the race.

Suitable sports equipment can enable students to maximize their potential in sports competitions, and prepare comfortable and professional sports equipment before the competition, which can not only help students play in the competition, but also effectively protect the keys, muscles and ligaments, etc., and reduce physical damage.

Students who have the habit of listening to music in running should prepare lightweight, easy-to-carry music equipment in advance within the scope of the rules, which can be used to reduce their fatigue and improve brain excitement during the competition.

Maintain and improve the logistics support office of Henan Polytechnic University, and further give the participating students a sense of security and happiness in the next competition. Do the behind-the-scenes work for students to achieve better grades.

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