Psychological ways of preparing to start by athletes; pre-performance language routines

Joanna Kotek, Józef Maciuszek

1 Instytut Psychologii Stosowanej, Uniwersytet Jagielloński
2 Instytut Psychologii Stosowanej, Uniwersytet Jagielloński

Summary

Introduction
Article investigates direct psychological preparation to start by analysing techniques used by athletes to indicate an optimal starting state. Main goal was to differentiate pre-performance routines from sport mantras, understood as repetitive use of language, and to answer the question if the mantras have different effects on the process of preparation to start. The article is based on own research and literature.

Subjects and procedure
Research contains survey, covering the issue of mental techniques used by athletes before the start (146 respondents). 15 interviewees were chosen for semi-structured interviews about use of pre-performance mantras.

Results and conclusions
The outcome was the definition of sport mantra and description of variations of its use. Differences between this technique and other strategies of mental preparation to start were described. The results of the study address that and the characteristics of the mantras technique. It also provides clues for teaching pre-performance preparation.

Keywords: sport psychology, mental training, preparation to start, pre-performance routines, sport mantras

Introduction

In the field of sport psychology a lot of concern is devoted to the topic of immediate psychological preparation to start. There are numerous techniques that the athletes use to get into the optimal zone of functioning which helps them to perform at the top level of their abilities and preparation. These techniques are also often the subject of psychological scientific investigation. The aim of this article is to show the results and implications of such a study.

The topic in question comes from well-researched psychological issues such as emotions and motivations, concentration, and pre-performance routines.

Theoretical background

The theoretical background of this study consisted of the findings of the field of sport psychology connected to the topic of emotions, motivations and concentration. It also uses some findings from the topic of mental training and pre-performance routines. In sport psychology emotions are covered widely, especially when one takes into account the fact that some of the authors (see Jarvis, 2007) broadened their scope to cover the whole topic of arousal.

In the situation of competition one can distinguish three different states of emotion: readiness, passion, and apathy (Gracz, Sankowski; 2007). Basing on the Yerkes and Dodson laws of optimal functioning (1908) and Hanin’s theory of the zone of optimal functioning (1986) we can say that the best state for participating in a competition is the middle one – in Gracz’s and Sankowski’s coverage – the start readiness which is synonymous to the optimal zone of functioning. The ability to change one’s level of arousal and teaching how to use it is the main goal of most programmes of mental training (Blecharz, 2006). They often contain elements of emotional regulation, concentration, and motivation (Łuszczyska, 2011). The athlete can manage arousal in a following ways: by changing thoughts, managing external symptoms of stress, conducting a special type of warm-up, performing massage, changing the focus for the stimuli with different emotional potential, performing breathing exercises, listening to coach’s suggestions, relaxing (Wjatkin in Gracz et.al., 2007). The athletes use the techniques of immediate psychological preparation to start in order to reach the zone of optimal functioning. The main techniques studied in this research are connected mostly to the change of thoughts, special warm-up, and changing the focus types of influence.

The topic of motivation is also vital for the field of sport psychology. In most cases one of the most import-
ant topics in that field is the difference between intrinsic and extrinsic types of motivation (Jarvis, 2007). The previous research (see Lidor, 2007) shows that the preparatory techniques connected to the cognitive-behavioural types of influence are efficient in enhancing the intrinsic motivation and lowering the use of introjections. The main focus of that study – sport mantras and pre-performance routines – can be seen as cognitive-behavioural techniques.

When we talk about the topic of concentration, finding the optimal zone of functioning is also important – similarly to the arousal and motivation levels. The best state for performing appears to be the flow state (Csikszentmihalyi, 1990) when the athlete is fully focused on the task at hand and no other distracting thoughts are in his or her head. According to some researchers, concentration could be the most important mechanism connected to the sport routines (see Shaw, 2002). These findings also reported that athletes who use these types of preparatory techniques are seeing the lowering levels of distracting. Also in many cases the routine becomes an automatic response of the organism and starts to be used consciously only in the moments when the athlete does not feel optimal for the performance.

Two main techniques connected to the topic of this study are self-talk and pre-performance routines. The findings concerning these two techniques were mostly used for the theoretical reference in this research. These techniques were verified mostly in the studies with the participation of elite athletes.

Self-talk is used mostly with aim to enhance the athlete’s motivation (Łuszczynska, 2011). It is defined as a self-dialogue in which the person is interpreting his or her feelings and perceptions, regulating and changing the results and beliefs, and giving to oneself instructions and reinforcements (Hackfort, Schwenkemezger, 1993). According to study coverage made by Łuszczynska, there is not a conclusive evidence for it being efficient, but it is still widely used by athletes during both competitions and trainings (Hardy, Gammage, Hall, 2001) and has reported high subjective effectiveness. The sport mantra is the most similar to one type of this technique called cue-word or triggers (Moran, 1996) but they are not identical because the trigger does not take into account the diversity that can be found in mantras. In general the text of self-talk is much longer than sport mantras, which in most cases are just short expressions. The important thing is also connected to the repetitiveness of mantras – the element that self-talk is lacking.

The pre-performance routine is defined as the systematic sequence of motoric behaviours, cognitive and emotional responses which are performed in a particular order before the self-paced task (Moran, 1996). Pre-performance routines include also the self-paced tasks performed by athletes during the game – like serve in volleyball or tennis or penalty kick in football. The impact of routines could be seen as an effect of different psychological phenomena such as conditioning or magical thinking (the last was already falsified – see Moran, 1996). The routines could also contribute to lowering the pressure and stress before start by putting athlete in the known environment. The same results could be partially an effect of the visualisation training (Morris, Spittle, Watt, 2005). The research shows that the most important is not the time of the routine but its stability. The athletes who have altered the sequence of their behaviours in the routine were performing significantly worse than athletes with alteration in time of executing routines. And the group without altering their routine has the best outcomes (see Lidor, 2007).

The main research question was connected to the fact that we know numerous examples of the pre-performance routines and not so many mantras which can possibly have different effects because of the use of the specific type of influence – language, which can carry larger amount of content than behaviour. Initial definition of the mantra was a repetitive language element which is a part of the immediate pre-performance preparation, executed by athlete in explicative, spoken form or in form of the internal speech. The main research question was: Do the mantras, because of their language content, have different effects on the process of immediate psychological preparation to the sport performance and can give a different outcomes in terms of performance results?

Subjects and procedure

The study was divided into two stages. The whole study was conducted between August 2014 and April 2015 on the athletes representing different disciplines of the qualified sport (taking part in the competitions).

The first stage was the Internet survey taken by athletes of different qualified sports regarding issues of immediate psychological preparation to start. The questions were closed, semi-closed and open which helped to obtain enough information about the techniques used in a researched group in a short survey. The study was conducted with the close attention to the issues of voluntariness and privacy.

In the first part of research 146 subjects took part. 123 of them were still active athletes and 23 have already ended their athletic career. 93 subjects were male and 53 – female. The average age of the group equals 25.03 years (the youngest participant was 15 years old, the oldest – 67 years old). The average time of being an active athlete equals 7.5 years (from 1 year to 39 years). 15 participants were working with the sport psychologist during their athletic careers. The subjects represented the whole spectrum of the sport levels – from amateurs to representatives of the national teams at the World Championships and Olympic level.

The participants represented 29 sport disciplines. The biggest group was formed by athletics (27 participants), mostly runners (23 participants), motor sports (22 participants including 18 representatives of car racing and rally driving), and team sports (59 participants in-
including 19 volleyball players and 20 players of frisbee ultimate.

All disciplines represented in the study are shown in the chart below.

Table 1. The disciplines represented in the study

The main goal of this part of the study was to choose the participants to the next stage, the semi-structured interviews with the athletes who use the sport mantras, defined in the beginning of the research as repetitive language element which is a part of the immediate pre-performance preparation, executed by athlete in explicate, spoken form or in form of the internal speech.

In this part 15 participants took part. They were chosen in the procedure of nonprobability sampling. 14 of them was still active athletes, one of them has already ended a sport career. The participants represented 12 sport disciplines (handball, volleyball, windsurfing, downhill, swimming, long-distance running, athletics, powerlifting, freestyle football, dart, karate, basketball). 3 of them were representants of team sports, 12 – the individual disciplines; 9 were representing Olympic disciplines and 6 – non-Olympic disciplines. 11 participants was male, 4 – female. The average age equals 22.5 years (from 17 to 29 years). The length of the sport career for participants in average equals 7.2 years (from 2 to 16 years). 3 of the participants worked with sport psychologist before. All of the participants in this stage of the study were using the sport mantras (as defined above) before taking part in the study. The average time of use for this technique equals 4.6 years (from 2 months to 11 years).

Every interview lasted approximately an hour and was prepared as a list of questions organised in a clusters of topics. Depending on the course of the interview, the questions could be added to explore some interesting topics in greater detail or removed to avoid redundancy.

The main clusters of topics are as following:

1. **Formal factors**: length, conscious vs. automatic use, integration with the routine;
2. **Origins of mantra**: influence of others for the use of the technique (both for trying the technique itself and for the content of it), consciousness of the process of learning to use the technique;
3. **Subjective outcomes**: importance of the mantra for the preparatory process, possible outcomes of not using it, and differences in outcomes for using routine and mantra;
4. **Chronology**: the length of using this technique, changes in time in both importance and way of use, subsequence in developing mantra and routine;
5. **Content factors**: the topic and the exact words used in it.

All the participants were informed about the topic of the study, the possibility of withdrawal at any time without any consequences and gave the informed content for the participation in research. When the participant was undergrad the procedure was also conducted with her or his parents. Also all of the study was conducted with close attention to the privacy and data security issues. At the end of an interview every participant had a chance to talk with researcher and obtain answers for all questions connected to the issue of the study and sport psychology in general. Some of them took advantage of such a possibility, some of them did not.
Results

The main result of the first part of the study was an insight into the topic of techniques used by athletes for immediate psychological preparation for the start. Most of the participants use more than one technique (the number of it varying from 2 to 5) – 98 participants gave such an answer. Only 48 subjects use only one technique for start preparation. It is worth to add that for this participants all of the preparatory techniques were serving as a database of ways of preparation for the start. Especially when we talk about participants with 4 or 5 techniques, they mainly choose the right one for the start they are participating in basing on the feelings and needs of the moment.

The number of participants using different numbers of preparatory techniques is shown on the chart below.

![Chart showing the number of participants using different numbers of preparatory techniques.](image)

Table 2. The number of participants using different numbers of preparatory techniques

<table>
<thead>
<tr>
<th>Number of Techniques</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>48</td>
</tr>
<tr>
<td>2</td>
<td>62</td>
</tr>
<tr>
<td>3</td>
<td>35</td>
</tr>
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<td>4</td>
<td>7</td>
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<tr>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

The answer for the question about the type of preparatory techniques used by the participants show that most of them use pre-performance routines (87 participants). The next position are sport mantras (47 participants), controlling thoughts and concentrating (30 participants), listening music (28 participants), talking with somebody (27 participants), controlling emotions (24 participants), visualization (24 participants). 22 participants were reporting the superstitious type of behaviour. It is important to note that many participants were describing at this point their reactions before the competition – mostly stress reactions – without knowing that it is not something they do to enhance performance but just a reaction of the organism, often the one that should be combat.

The results of the study in every field of interview described above are as following:

1. Formal factors

The first thing participants was asked about was their own definition of mantra. The answers covered both mantra as a form of activity (“habit that calms me down”, “the sequence of things I say to myself”) and its outcomes (“cheering for myself”, “preparation for every occurrence”, “something that gives me optimal motivation to the start”).

The answer for the question of the length of mantra is not simple, mostly because participants reported having more than one kind of them. In this study it varies from one word to few simple sentences. Most often (in 9 cases) it was few words or short exclamations. Only two persons reported having longer form of mantra, with longer sentences coming in the definite order (in one case it was a prayer). There were also participants who used several of their mantras in a random order, but in this case we cannot talk about any bigger sequence or long mantra. Many athletes were explicitly talking about the need to keep the mantras short because of the limited time for preparation and bigger possibility to adjust it to the situation.

Similarly to the findings from the first stage of study, many of the interviewees (9 of them) talked about integration of mantra and routine. 6 of them talked about paying particular attention to the sequence of the preparation and were talking a lot about necessity of maintaining this sequence for achieving a desired outcome. 4 participants reported using also a visualisation. That technique was not integrated to the procedure of immediate preparation to the start – in most cases it was used on the day before the competition. Only 3 participants did not report the use of any other technique than the sport mantra.

Most of the participants (10 of them) talked about conscious use of mantras – their choice depending on the situation or need, influence of others, developing that technique on purpose or intentionally putting it on the particular place in the sequence of the preparation. 5 participants were talking about automatism in this area, like “it just comes to me”, “I'm not analysing this before at any way”. This group sometimes also reported that they did not know that it is any particular technique and never thought about it until the study interview.

Most of the interviewees use mantras privately, in thoughts (11 participants). Some of them use it also explicitly, saying it out loud (7 participants). Interesting are the groups that are using as someone else’s speech as their mantra (use of music, with paying a special attention to the lyrics and use of some motivational speeches). Important is also the fact of developing spoken mantras from the ones that was listened to. The fact of using songs to develop spoken mantras is also important. It is worth to note that there were also 3 participants who reported the sport mantras featuring the participation of other people. It was the case of influence of the members the team (a captain influencing the teammates or with training or starting partner) – both given and received.

Other thing worth a notation here is the fact that participants were reporting using mantras not only as a preparation to the start but also during the competition (especially in the endurance sports) and during training.
2. Origins of mantra

The most frequent answers here were connected with the influence of other persons — mostly coaches and idols (13 answers). Most of respondents was talking about the influence of the coach — very often without the coach’s awareness of the fact. This influence is connected both to the fact of athletes being taught about the technique and with using some expressions that later became mantras. Often it is also the influence of culture (12 answers) — here participants talked mostly about inspiration for the content of mantras, rarely about the idea of trying out the technique. Some participants talked also about music and mantras coming from the lyrics of songs listened as an immediate preparation to the start. 9 answers were connected to the subject of experience — such as “I’ve tried it and seen how it helps me”. Only 2 persons was taking it out as superstitions (“the start when I did it for the first time was successful, so I’m doing it every time now”).

The chart below shows what source of inspiration was used by interviewees to develop their mantras:

![Bar chart showing the source of inspiration for mantras development]

**Table 3.** The source of inspiration for mantras development

In general, the personal experience was the most important thing that was coming out of the participants answers. For both those who developed mantras consciously as a way of preparation to start and those who created them unconsciously, just by trying out different things, the personal experience and testing different forms of mantra was the most important and the most valuable in this process. It is also worth to note that these answers were split evenly, similarly to the answers for question concerning the awareness of using this technique prior to the study.

3. Subjective outcomes

This topic was the most important part of the conducted interviews because of the research question. As an answer for the question of the subjective outcomes of using mantras, the participants were talking about arousal and motivation (14 answers), concentration — understood both as a way of shutting down the distracters and the “trigger stimulus” (10 answers), calming down and enhancing the perceived level of safety (12 answers), and enhancing self-confidence (6 answers). 13 participants explicitly pointed out that for them the most important in using mantras is the content and meaning they come with.

Only 11 participants out of 15 use both mantra and routine. Only 2 of them answered that the effects of both are exactly the same. Most participants that have seen the differences was talking about routines as a way to prepare the body for the competition — for example, enhancing arousal. Mantras for them have more psychological effects — mostly motivational which was not mentioned by anyone in connection to the topic of routines.

The main differences in the effects of using mantras and routines are shown on the chart below.
According to that findings the answer for the main research question is positive — the sport mantras do have different psychological effects than pre-performance routines and therefore should be considered a separate technique of the immediate psychological preparation to start.

6 out of 11 respondents said that for them mantra is important or very important and 5 participants said it would not be any problem for them to left it out of the preparation. One answer was particularly interesting: the participant stated that mantras have impact only at the beginning of the competition and after that it is not important anymore whether he used it or not. Only 2 participants were showing any sign of magical thinking and using mantras in a superstitious way but most of them (12 participants) would notice the difference in performance if they did not use their mantras – mostly in lowering concentration level, higher perceived pressure and lower feel of safety.

4. Chronology

Several participants reported using mantras from the beginning of their sport career (7 participants). There were also cases when the respondents could not show a precise moment they started using mantras. It was often difficult for them because of the reported spreading of the use of such technique in different parts of life — in some cases it was used before in other areas and then got transferred to the field of sport competition; in some cases it was the other way around. Some of the athletes do not have any trouble with identifying the point in time when they started using mantras. In these cases it was connected to the specific change in the career, like beginning the participation in a higher level competitions (5 participants).

10 interviewees noticed the change in importance of mantras for them. 7 reported that this importance was growing with the development of their sport careers, mostly because of their gaining experience — both in sport and in using mantras. 2 participants described the lowering of mantra’s importance (mostly because they have got more experience and do not need so many tools for containing stress and pressure) and 2 of them reported non-linear changes, mostly connected to the changes in their sport careers (like starting to get new experience in the different level of competition or changing the discipline). The chronology of developing mantras and routines was not definite. For 4 participants the mantra was first, for 3 participants the routine was first, and 3 participants developed them both simultaneously. These findings also support the conclusion about mantras and routines being different techniques that can be developed separately and in random order.
5. Content factors

The content of mantra is mostly connected to the discipline performed by the interviewee. There are mantras with the purpose to magnify one’s abilities and devaluate the task in hand in such manner as “only 2 more km”, “you’ve lifted more during practice”, “one more round to go”, etc. Other type of content is devaluing the opponent (mantras like “he is also tired, he also feels pain”). Some of the participants also reported using mantras to make sure they are aware of the strategy (“don’t go to fast on the beginning”, “be careful for the serve”, “I will be calm and concentrated”, etc.). Some mantras are also, as said before, used by athletes as “cheering for themselves” and sound like that: “you are the best”, “you’re doing great”, “I’m really well prepared”, etc. This effect seems to be the most important for the participants. Many of the interviewees were also talking about mantras featuring war metaphors (“better dead than weak”, “this is the fight for life”, etc.). Some of the participants talked also about mantras connected to the particular result they wanted to achieve on that particular event, some of them – on the contrary – were highlighting the value of fun and participation.

It is worth to note that only a few participants refused to quote their mantras, in most cases because they wanted to avoid using vulgarisms during the interview.

The amount of the mantras with the particular content is shown on the chart below:

![Chart showing the amount of mantras with particular content](image)

**Table 5.** The amount of the mantras with the particular content

An interesting observation is connected also with grammar – to be precise, the grammatical person. Some of the participants use the first person mantras (“I am . . .”, “I will . . .”) and some use the second person (“You are . . .”, “You will . . .”). Interesting thing is also that in many cases these two forms were present in two different mantras of one participant. Due to the lack of time and resources, this topic was not further explored but deserves further inquiry.

For the question concerning the amount of mantras, the precise answer was obtained only from 9 participants. The average number equals 4.33 (from 1 to 15 mantras) but most participants said that they have “from one to a few” mantras and pointed out that in the situation of competitions they use only one of them. 5 participants were not able to answer how many mantras they have but in every case it was more than one – the most frequent answer was “a few”. The participants were often talking about the potential of mantra being depleted and, therefore, the necessity to change it from time to time.

The topic of choosing mantra to the actual use was also interesting. In many cases (9 answers) participants derive them from their feelings and needs at the spot (“it is just something I feel that I need to hear at the moment”). That was especially characteristic for the participants that have many mantras with different effects and content. Some of the participants were also talking about deriving their mantras from the opponent, preparation, weather, tactical and strategic aspects and other factors. 3 participants talked about spontaneous and not conscious decision (“it just comes to me at the moment”, “it just pops to my head”).

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Conclusions and practical tips

The main issue is an attempt to differentiate pre-performance routines from sport mantras, understood as linguistic behaviours and repetitive use of language. The outcome of that was positive – the sport mantras was distinctively different technique for the interviewees. Also, in the light of the findings, the answer for the research question is positive. The sport mantras have a different outcome for the performance and are used by athletes differently, so they should be treated separately from other forms of immediate preparation to start such as pre-performance routines or self-talk. The second one is more connected to the sport mantras because of the mutual linguistic character of this techniques but even this one is not the same – it lacks the element of repetitiveness.

Other, the most important conclusions that could be drawn from the study described above, are as following: most sport mantras are prepared individually by the athlete;

- most athletes have multiple techniques for the immediate psychological preparation for the start. Mantras are – in many cases – one of the steps in this complex and sequential process;
- mantras are used by athletes not only before start (like routines) but also during the competition. It especially applies for the endurance type of sports;
- the important thing for athletes are also training mantras;
- the mantra technique has a tendency to spread on other types of activities for the person that started to use it in one area of life;
- in the process of educating athletes about the procedures of the immediate psychological preparation to start the important thing is to pass the knowledge about different techniques;
- many of the questioned athletes had not sufficient knowledge about psychological techniques of immediate start preparation which is a big role to play for both sport psychologists and coaches;
- on the other hand, the big self-awareness of the athletes and their knowledge about their needs could be observed. The problem is, probably, mostly the passing of the formal psychological knowledge to the athletes who already feel the need of developing their own ways of the start preparation.

The main outcome of this study is the new definition of the sport mantra. In the light of the findings the initial definition has to be changed for:

Sport mantra is a repetitive language element used by athlete in the procedure of the immediate preparation to the start or during the performance, a medium, individual for every athlete, for the content developed with an aim to enhance a performance and create a better outcome. A sport mantra can be in an explicit form, in form of internal speech, or in form of received content.

The practical conclusions of this study are directed mostly to persons who have a direct influence on athletes – like coaches or sport psychologists. The most important tip is to pay attention to the psychological education of athletes. Also it is vital that coaches pay attention to their own behaviour and words, because really often they become a mantra for their athletes (or at least an inspiration for one). The key note to take is also the fact that the most important in the influence of others for the process of developing sport mantras is to make the athlete aware of the existence of such a technique and to give the athlete some time to discover the best technique that suits him or her and check it out in a variety of situations and circumstances (Blecharz, 2006). Changing mantras during the athletic career is also important – the athlete should be informed about the possibility that one mantra may stop having any effects and could be the need to replace it by the new one. The above-mentioned effects are also applicable to all immediate ways of psychological preparation to start (Faggiani, McRobert, Knowles, 2012; Lidor, 2007). The athlete should be made aware of many possible techniques and have a possibility to test all of it and choose the most suitable one for the moment.

The important note is regarding the differences between routines and mantras. There is a lot of the evidence about teaching routines to the beginning athletes (see Lidor, Singer, 2000). Some authors strongly advice to do it early while others pay attention to the fact that it can interfere with developing automatism of the movement and correct technique of the sport performance. Some authors even advice not to teach routines until the athlete develops the suitable level of technical experience (Faggiani, McRobert, Knowles; 2012). The sport mantra could be an answer for this dilemma, providing the benefits of repetitiveness in the immediate preparation to the start without the need of developing another movement habit.

Research perspectives

Because the main goal of this study was to describe the phenomenon of the sport mantras, it is easy to highlight on this ground the possible future research possibilities.

First and the most important line of enquiry should be preceding the physiological study about the objective outcomes of using sport mantras on the physiological stress responses. The other topic may concern the difference between mantras and self-talk, in the similar way how the difference between mantras and routines was investigated in the study described above. It may be important mainly because of the phenomenon of the training mantras, which seems to have a lot in common with the instructional type of self-talk. Other topic that comes out from the finding of this study is the change in using mantra in time. The chronology was addressed briefly, but it was not showing any particular pattern of changes, so a more in-depth investigation would be valuable. Other aspects which would be worth further
exploration are connected to the language psychology. One of them is the use of war metaphors and vulgarisms and its connection to the gender of the user. In this study such topics appeared only in the answers of male participants who additionally did not want to talk about it a lot, so probably the further research regarding this matter should be conducted by a male researcher to make interviewees more comfortable. Other topic connected to this field of study is more in-depth look into the grammatical aspects of the sport mantras — some of the participants used the first-person mantras (“talking about oneself”), while others used second-person mantras (“talking to oneself”) which could also be connected with some interesting psychological differences. Other topic which comes out of this study and should be further developed is the issue of use of the music to the immediate psychological preparation to the competition. Research participants talked about it often — referring both to the musical and lyrical layer of such an influence. It is used by them to lower or increase the level of arousal, so this could be interesting topic connecting the fields of psychology, music, and linguistics.

**References**


