

Can imagery technique enhance the goalkeeper performance?

Izham Mat Isa *, Mohar Kassim

Centre for Coaching Science, National Defense University of Malaysia

Abstract: This study aimed to investigate the relationship between imagery technique in sport psychology with individual preparation and performance among men's hockey goalkeepers. The sample involved 45 male hockey goalie selected through random sampling. The findings will analyze by using computer software, Statistical Package for Social Science (SPSS) version 21. The expected results of the analysis will indicate two important findings: first, the imagery technique that used as a mental exercise has a significant correlation between the performances of the preparation of intermediate effects and second, it has a significant relationship between preparation and performance of intermediate effects. The results of this study are very important to help improve the performance of the national hockey team, increasing research in this field and also to serve as a guide to the national hockey team athletes, especially men's hockey goalkeeper.

Key words: Imagery; Mental training; Men's field hockey goal keeper

1. Introduction

Fitness is defined as the condition that allows an individual to lead a perfect life and to deliver his tasks efficiently, and in turn produces useful contributions and services. Fitness consists of five components, which are physical, emotional, spiritual, intellectual, and social fitness. All the five components of fitness need to be adjusted and balanced in order for an individual to get on with his daily life. According to Kassim and Mokhtar (2016), physical fitness is a component that constitutes total fitness that is constantly being used in acting or in any order form of action. The first hockey game introduced in Malaysia is in 1948. Malaysia was not independent at that time and still under British administration. National Hockey Council of Malaysia had collaborated with Singapore. Currently, Malaysia has a national team. Instead, every state and uniformed must have their own hockey team. However, this team still has not reached the achievement and it is difficult to bring the country to international levels. Malaysian hockey players' performance was seen quite lackluster. So this study will try to look at the psychological aspect of hockey goalkeeper and its impact on their performance. (Noor et al., 2010).

Through the study of sports psychology, psychological factors can be studied with regard to helping athletes succeed in a competition. Such studies have been carried out by Blumenstein et al. (2008) and Samulski et al. (2008) who studied the relevant scientific knowledge about the psychological factors that influence and associated

with an increased performance of athletes at Olympic level.

In addition, Gould and Maynard (2009) also conducted research on the psychology of athletes as well as a comprehensive and dynamic approach to identify physiological changes experienced by athletes. The results showed there were 14 changes the psychology of athletes before the Olympics, eight changes take place during sports and 11 changes in the phase after sports. It has clearly shown a change in the psychology of athletes as bigger changes appeared in the phases before and after the match. Kassim (2012) stated that the important of coaches requiring knowledge in the coaching process are important to build up the quality of fitness level using the norms of physical fitness. Kassim and Isa (2015), noted that the athletes are engaged in a process of learning, which involves important aspects interpersonal and intrapersonal skills. This is supported by Kassim and Berahim (2015), a conducive learning environment is also important, as well as giving them a reward if they achieve excellence

Through the study of sports psychology, psychological factors especially imagery technique can be studied with regard to helping athletes succeed in a competition. Such studies have been carried out by Blumenstein et al. (2008) and Samulski et al. (2008) who studied the relevant scientific knowledge about the psychological factors that influence and associated with an increased performance of athletes at Olympic level.

This shows participants who apply psychological training will get the same results or even less to the percentage of time during practice. Participants appear to get greater benefits from the application of music during practice (Tate et al., 2012).

* Corresponding Author.

For this study, the imagery technique will be tested as psychology training such as mental training. The model established is the result of using random sampling method. Model sampling refers to the way subjects were selected for study and divided among different groups. Thus, the sampling model is subject to the data.

2. Objectives

The objectives of this study as follows:

- i. To identify the effectiveness of "imagery" with the performance of the goalkeeper.
- ii. To compare the performance of the goalkeeper who undergo mental training with those who do not.
- iii. To develop guidelines that can be used to improve performance.

3. Conceptual framework

Based on the literature on previous studies, in this study, the conceptual framework is shown in the form of Fig. 1. Now and Bougie (2009) and Zamalia (2009) states that the variable is any differentiated value. Variables are divided into independent and dependent variables in this study.

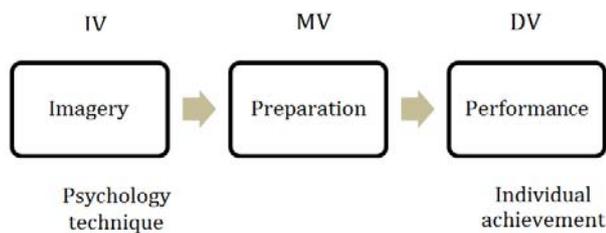


Fig. 1: Conceptual framework

4. Research questions

As well known, the role of the goalkeeper is very important. So, there are some issues that need to be considered when carrying out the study. Among them is to see whether the performance of the men's hockey goalkeeper will increase with the application of imagery technique.

The next question is to examine whether the techniques of imagery such as mind training provided capable of forming an effective model to serve as a guide for improving the performance of the men's hockey goalkeeper.

5. Research interests

The study is very important to help the national hockey team to improve their performance during competition. This study focuses only on the goalkeeper because the role of the goalkeeper is very important in a game when dealing with opponents. In addition, the results of this study is to develop a psychology model that can be used as a guideline and reference to the coach and goalkeepers whether at school or at the national and international level. In fact, this psychological model may also be referred

by athletes besides hockey game because it involves the use of variables self-talk and imagery to help athletes improve their athletic performance. The results of this study can also be used as an academic reference that is useful to researchers in future to conduct research of the psychological aspects related to hockey goalkeeper as it is still lacking.

On the other hand, motor-based fitness refers to the muscle potential and the ability of an individual to carry out physical activity in terms of balance, agility, speed, power, reaction time and coordination. In addition, physical training is defined as training required preparing players' respiratory, energy, and muscular systems physiologically from aerobic, anaerobic, and strength perspectives (Kassim and Ali, 2015). This is supported by Kassim; Azmir and Mokhtar (2014), fitness is defined as the condition that allows an individual to lead a perfect life and to deliver his tasks efficiently, and in turn produces useful contributions and services. Fitness consists of five components, which are physical, emotional, spiritual, intellectual, and social fitness consequently, according to Kassim; Ahmad and Muda (2016) cardiovascular endurance is a most important component in the human physiology.

6. Research methodology

The questionnaire used survey method or descriptive method in the study as the main instrument for collecting quantitative data. A pilot study will be conducted as part of the process of data collection in which a group of individuals must answer a questionnaire that has been provided. This method is more practical because it requires the study of multiple samples. In addition, the study also used the interview as the procedures are combined together to obtain high quality data and also to avoid bias in collecting data (Creswell, 2009; Kassim, 2008).

The survey questions contained variables that were established in this study will be given to the respondents, the men's hockey goalkeeper. Interview technique also needs to be done to coaches of hockey teams to identify and verify the problems of such studies that have been studied before. This needs to be done to support the results obtained from the analysis of data in SPSS.

7. Literature review

Based on the results of a study conducted by Sofian et al. (2009), there was a relationship between imagery with sports performance. Through techniques practice, this imagery can be very useful, to build psychology and self-confidence in producing more quality athletes (Nordin and Cumming, 2008). This technique also involves mental training such as planning and thinking. The use of more mental training will increase the performance of athletes and this fact is supported by Cumming and Hall (2002), which argued that successful athletes have exercise and mental imagery more training. Imagery

techniques, according to the study by Murphy and Martin (2002) are a part of sports psychology that can contribute to the success of a group during a match. In addition, many athletes have recognized abilities and power that bring the high resolution in sport performance. Most successful athletes also confessed that their success was also aided by imagery techniques (Murphy and Martin, 2002).

Moreover in the view of Haunsenblas, Hall, Rodgers, and Munroe (1999), not only athletes but exercisers also use imagery for the purpose of improving their performance. However not all athletes are able to verbally tell about how they apply this technique. Generally, imagery is helping athletes. This was also supported by Anderson (2000). He argues that the imagery can help one to achieve the desired performance.

8. Conceptual definition

8.1. Imagery

Sports psychology techniques of imagery are not something new. This method has been proven to work successfully in bringing changes in the sports field, particularly on the performance and motivation of players and teams. Generally, this technique is very synonymous with coaching, consulting and training to athletes' mental (Taylor and Wilson, 2005). At the beginning of the introduction to this imagery technique, there are some terms which are used as mental training and mental preparation. However, no solid explanation of how it should be implemented. Yet, today, many have used the term mental imagery more widely in terms of sports science (Holmes and Collin, 2001).

In addition, the imagery technique is also very relevant to few other exercises. It had broken into several other functions more (Hall et al., 1998). Among the five functions that have been hotly discussed, three of which have been touched on motivation as the main thing that needs to be emphasized. The first is Specific Motivation related to mental exercises to achieve goals. The second is Arousal Motivational General of mental training related to cyclical concerns, while the latter is General-Mastery Motivation which is closely related to mental training through the increased perception of control.

In short, the imagery can affect when a person is given the task that involves physical force as the sensory stimulus affects the muscles that work through specific job functions. Through imagery applications, improvements can be made to maximize the performance of athletes.

9. Preparation

Preparation is related to how people use the knowledge that has been owned for getting mentally prepared before the game and practice. However, in the present distinction between teams and

individual players is at the minimum, and also due to the excess from the psychological side. Some players are born as mentally strong player but like in terms of physical, mental aspects are also being trained. Coaches must also try to get everything out of their players and forces every day, so this idea is to realizing a tool that allows players to easily learn more about mental inventory within a short period of time.

There are several different aspects and ways for mental preparation but the two aspects that need attention are: mental imagery and self-talk. Most players know something about self-talk and mental imagery as concepts but they do not know how to use it in practice. Calculated mental preparation is still a rather strange concept for most young players so the decision was made to approach it from a very simple way (Jani and Matias, 2015).

Among the aspects that should be included in the preparation is to train and develop the mental preparation of players before the performance. In addition all players need to know about mental preparation to develop their mental skills easily.

Mental preparation has to be practiced before the game. If the athletes are trying new techniques for the first time it would take too much energy to just focus on the preparation. That is why athletes should practice techniques of preparation before the game or in a smaller competition. The right mental preparation can last a whole day or just a few hours before the performance (Judge, 2010).

Apart from that, according to Kassim (2008), the players-centered process category considers the impact of the players' characteristics on the coaches' management of the team. The player-centered process category comprised the players' routine, coaches concern for players, and the personal characteristic of players.

In addition, Kassim and Isa (2015) emphasized that coaching performance is the most importance elements in coaching process. The authors added that since coaching is a continuous process, the coaches' style of coaching is important and this aspect is very much related to the knowledge and experience of the coaches. As far as the coaching style is concerned, there were a number of ideas held by the football coaches in this study that were related to their beliefs. The coaches felt that in order to succeed they had to develop a coaching style which best suited their personality. Therefore, the philosophy and beliefs that a coach holds will impact on their coaching style

10. Performance

Performance can be described as a discrete event where a performer showcases a specific set of developed knowledge, skills, and abilities (KSAs). Performance also intends to use the knowledge skills or abilities that are different from what they have. According to Aoyagi and Portenga (2010), "A good performance requires the development mastery and the ability to get consistent performance". Moreover,

in general it refers to the discipline and profession of to build psychology performance which has intuitive appeal to experienced practitioners. In the field of performance to build psychology, practitioners still need to have special knowledge to every domain in which they choose to work (e.g. sports, medical, military perform high-risk jobs). For example, in the context of the sport is a unique performance environment that requires specialized training outside the public performance (Aoyagi et al., 2012).

11. Conclusion

Overall, this study aims to identify the significant for imagery, preparation and performance. The studies confirmed the method of constructing the instrument. After identifying variables, a pilot study should be conducted to see the effectiveness of the variables that have been set up to connect the psychological aspect and the performance of the men's hockey goalkeepers. The findings of the respondents would answer the questions of the survey and will be used to analyze the relationship between the two aspects. Among other measures to be taken is through interviews with the coaches men's hockey team to get the whole picture and confirm the problem statement.

Kassim (2008) suggests that coaches who are concerned with the well-being and development of their players create a more positive learning environment. Kassim (2008) highlighted that the importance of positive environmental sources such as reward from coaches, parents, peers, and others is a key for the athletes continued involvement in sports, and coaches should be aware of how motivation can be influenced by positive environment. In this study, the coaches were aware of the importance of sustaining a positive environment and they continuously attempted to create a climate conducive to the team achieving its goals. For example, the coaches should emphasize the importance of acknowledging each player, always creating a positive environment, to avoid quarrels with the players and he made the players aware that the coaches care.

Relevant to this is the view of Kassim and Isa (2015) who argues that understanding the players' stages of learning by the coaches is an important task in training youth players. The coaches in this study paid attention to the overall well-being of their players and endeavoured to ensure they helped their players excel in their football and academic careers. As pointed by Kassim and Berahim (2015), it is important not only to develop the athletes as good players, but to build them as individuals who are potentially intelligent and dynamic people. For example, the coaches not only cared for the welfare of the players, but also the players' career after they finished their term of schooling. To these coaches, concern for the well-being of their players meant helping them excel in both their hockey and academic work.

The concern shown by the coaches to the players was appreciated by the players (Kassim, 2008) have stressed that athletes who were highly compatible with their coach evaluated overall behaviours more favourably than athletes who were less compatible with their coach. This means if the athletes' goals and personality are compatible with those of the coach, their interactions will be considered satisfactory and will make for a positive atmosphere. The authors observed that the concerns showed by the coaches towards these players had produced a positive attitude and team cohesion and above all, the players were happy to be with the team.

Since coaching is a continuous process, the coaches' style of coaching is important and this aspect is very much related to the knowledge and experience of the coaches. As far as the coaching style is concerned, there were a number of ideas held by the football coaches in this study that were related to their beliefs.

Greater importance should be placed on the review of the coach education programme to ensure the effectiveness of the programme in producing competent coaches and quality players in future (Kassim, 2008). In addition, Kassim (2008) stated that Training and competition are elements of the coaching process and become important indicators for the hard work undertaken by the players to enhance performance.

As such, the physical, tactical and technical training carried out by the coaches were meant for the players to develop their skills and prepare themselves physically and technically for national and international tournaments.

In addition, Kassim (2008), in the coaching process, apart from the coaches, the players, as the coaching recipients are the other important element in the process. The transfer of knowledge to the players is very important in the coaching process.

Coaches cannot rely on their knowledge per se, but they should know how to organize and apply or make use of their knowledge in a particular sport. If coaches failed, it will affect the quality of coaching. This has been supported by Rink et al. (1994), stated that the way coaches organize and structure their knowledge very much related to the experience of the coaches.

Hence, the present study offers significant contributions to hockey development in Malaysia. This study extends the previous research on hockey goalkeeper since there is very little literature that elaborates the impact of knowledge and behaviour of coaches the performance of players. None of the previous authors looked at the hockey goalkeeper performance and previous models of the coaching process.

This study also fills an important research gap on the Malaysian hockey team since to date no research has been carried out in Malaysia on the area of goalkeeper performance, particularly at the national level. Thus, the study of the hockey goalkeeper in this study will add to the literature on goalkeeper performance in the country. The acquisition and

development of hockey goalkeeper will need to be given serious attention in coaching practice and performance of the Malaysian hockey team in.

The changes in the syllabus and contents of the coach education programme also need to be made by the Malaysian Hockey Council to include more practical coaching content, including the mentoring programme.

This would realize the concept of reflection on action and learning through experience (Gilbert and Trudel, 2006) which is crucial in the context of the coaching process. This means the implementation of the coach education programme for the hockey team needs to be improved, including the incorporation of practical coaching aspects in the coaching manual, the prolongation of the hockey season and the development of a formalized mentoring programme among the coaches at the national level.

The time has come for the Malaysian Hockey Council as the governing body to realize the importance of major improvement and modifications to be made to the coach education programme, starting with the programme at the academy level. More focus should be made to develop successful players through quality coaching programmes and competent coaches in the academy for the benefit of the sports development in the country, particularly hockey.

Greater importance should be placed on the review of the coach education programme to ensure the effectiveness of the programme in producing competent coaches and quality players in future. Future research should also continue to examine the role and involvement of more parties or agencies in the development of the coach education programme in the country

Greater importance should be placed on the review of the coach education programme to ensure the effectiveness of the programme in producing competent coaches and quality players in future (Kassim, 2008). In addition, kassim (2008) stated that Training and competition are elements of the coaching process and become important indicators for the hard work undertaken by the players to enhance performance.

As such, the physical, tactical and technical training carried out by the coaches were meant for the players to develop their skills and prepare themselves physically and technically for national and international tournaments.

References

- Anderson, M.B. (2000). Doing sport psychology (chapter 6, doing imagery in the field).
- Aoyagi, M. W., and Portenga, S. T. (2010). The role of positive ethics and virtues in the context of sport and performance psychology service delivery. *Professional Psychology: Research and Practice*, 41(3), 253-259.
- Aoyagi, M. W., A., Portenga, et al., (2012), *Defining the Practice of Sport and Performance Psychology*
- Division 47 (Exercise and Sport Psychology) of the American Psychological Association. Retrieved 17/2/2016, from <http://www.apadivisions.org/division-47/about/resources/defining.pdf>
- Blumenstein, B., and Lidor, R. (2008). Psychological preparation in the Olympic village: a four-phase approach. *International Journal of Sport and Exercise Psychology*, 6, 287-300. doi:10.1080/1612197X.2008.9671873.
- Creswell, John W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 3rd Edition. Los Angeles: Sage Publications, Inc.
- Cumming, J., and Hall, C.R. (2002). Deliberate imagery practice: The development of imagery skills in competitive athletes. *Journal of Sports Sciences*, 20.
- Gould, D., and Maynard, I. (2009). Psychological preparation for the Olympic Games. *Journal of Sports Sciences*, 27, 1393-1408. Doi: 10.1080/02640410903081845.
- Hausenblas, H.A., Hall, C. R., Rodgers, W.M., and Munroe, K.J. (1999) Exercise imagery: its nature and measurement. *Journal of Applied Sport Psychology*, 11, 171-180.
- Holmes, P. and Collins, D. (2001). The PETTLEP approach to motor imagery. A functional equivalence model for sport psychologists. *Journal of Applied Sport Psychology*, 13, 60-83.
- Hutchinson, J, C., Sherman, T., Martinovic, N., and Tenenbaum, G. (2008). The effect of manipulated self-efficacy on sustained and perceived effort. *Journal of Applied Sport Psychology*, 20, 457-472.
- Jani A. and Matias L. (2015). Mental preparation for hockey players: Study on self-talk and mental imagery. Bachelor's Thesis Degree Programme in Sports and Leisure management. DP XI, pg 39.
- Judge Larry W, (2010). Developing a Mental Game Plan: Mental Periodization for Achieving a "Flow" State for the Track and Field Throws Athlete. Retrieved 17/2/2016, From URL: <http://thesportjournal.org/article/developing-a-mental-game-plan-mentalperiodization-for-achieving-a-flow-state-for-the-track-and-field-throws-athlete/>
- Kassim, M. (2014). Relationship Between Knowledge of Coaching and Behaviour of Football Coaches. *ZULFAQAR International Journal of Defence Science, Engineering and Technology*, 1(1), 43-51.
- Kassim, M., and Ali, N. R. (2015). An Effective Coaching Through 'Coaching Model'. *Journal of Scientific Research and Development*, 2(9), ISSN 1115-7569.

- Kassim , M., and Berahim , M. (2015). Football training Development Programme under-15 years old State Level. Australian Journal of Basic and Applied Science , E-ISSN: 2309-8414.
- Kassim , M., and Mokhtar , R. S. (2016). The Evaluation of Cardiovascular Endurance Test for Male Cadet Officer. Modern Applied Science, 10(2), 11-16.
- Kassim , M., Azmir, H., and Mokhtar, R. S. (2014). The Development of Portable Application Software for Cardiovascular Fitness Norm of NDUM Cadet Students. ICSS 2014 : 18th International Conference on Sports Science. 1 (10). Dubai: International Journal of Sport and Exercise Sciences.
- Kassim, M. (2012, May). The Acquisition of Knowledge by the Coaches : Can Qualitative Approach Help ? Jurnal Sains Sukan dan Pendidikan Jasmani, 1, 24-34.
- Kassim, M., and Isa, I. M. (2015). The Important of Psychology Factor for Female hockey goalkeeper. Journal of Basic and Applied Science , ISSN :1991-8178.
- Kassim, M., and Mokhtar, R. S. (2015). Test and Measurement of Cardiovascular fitness for Female Cadet Officers. Journal of Scientific Research and Development, 2(8), ISSN : 1115-7569.
- Kassim, M., and Rustam , S. (2015). Inculcation of Value in Co-Curricular Activities form Virtues Module. Journal of Scientific Research and Development, ISSN: 1115-7569.
- Kassim, M., Sheikh Ahmad, S., and Muda, B. B. (2016). Konsep Latihan dalam Sukan . Kuala Lumpur : Pekan Ilmu Publication .Kerlinger, F.N. and Lee, H.B. (2000). Foundations of Behavioral Research. 4th ed.Fort Worth, Texas : Thompson Learning.
- Mohd Noor, Mohad Anizu and Sa'ari, Mohd Fadli (2010) Mengkaji Perbezaan Tahap Kelajuan Dan Ketangkasan Pemain Hoki Wanita UTM Dengan Pemain Hoki Wanita SUKMA Johor. Mohd Nizar Ahmad Padzi in "Masyarakat perlu didedah psikologi sukan". (2013, 19th June), Bernama
- Mohd. Sofian Omar-Fauzee, Wan Rezawana Binti Wan Daud, Rahim Abdullah dan Salleh Abd Rashid (2009). The Effectiveness of Imagery and Coping Strategies in Sport Performance, European Journal of Social Sciences – Volume 9, Number 1
- Murphy, S.M., and K.A. Martin. (2002). The use of imagery in sport. In advances in sport psychology, 2nd ed. T.S. Horn. Champaign, IL: Human Kinetics.
- Nordin, S., Cumming, J., Vincent, J., and Mcgrory, S. (2006). Mental practice or spontaneous play? Examining which types of imagery constitute deliberate practice in sport. Journal of applied sport psychology, 18, 345-362.
- Samulski, D., and Lopes, M. (2008). Counseling Brazilian athletes during the Olympic Games in Athens 2004: important issues and intervention techniques. International Journal of Sport and Exercise Psychology, 6, 277-286
- Tate, A. R., Gennings, C., Hoffman, R. A., Strittmatter, A. P., and Retchin, S. M. (2012). Effects of bone-conducted music on swimming performance. Journal of Strength and Conditioning Research, 26, 982-988.
- Taylor, J., and Wilson, G. (2005). Applying sport psychology: Four perspectives. Champaign, IL: Human Kinetics.