



Development of Small Sided Games Training Variations in the Game of Hockey

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Abstract

This research aims to produce a product in the form of a book about exercise variations of small sided games. The subjects in this study were 10 athletes for small group trials and 20 athletes for large group trials. The product in this research has been designed and then validated by 2 material experts, namely, a material expert, a hockey coach expert and an expert in small sided games hockey. The first stage of the trial showed that the results of the SGDH expert assessment were that a percentage of 81.29% was obtained in the very feasible category. Then the material expert trial obtained a percentage of 77.08% with the appropriate category. The expert trainer trial obtained a percentage of 79.16% in the feasible category. The results of trials on athlete respondents for small groups were carried out on 10 North Sumatran hockey athletes, where a score of 342 was obtained with a percentage of 85.5%, so the Small sided game hockey training product was in the very feasible category. The second stage of the trial showed that the results of the small-sided game hockey expert's assessment were that a percentage of 93.75% was obtained in the very feasible category. Then the material expert trial obtained a percentage of 91.67% with a very feasible category. The hockey coach expert test obtained a percentage of 89.98% with a very feasible category. The results of the large group trial were carried out on the Unimed hockey field where the total score was 718, with a percentage of 89.75% (Very Eligible). Based on the results obtained in the initial group test, main group test and operational tests that have been obtained, training variations are carried out and small sided games hockey can be used.



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INTRODUCTION

Hockey is a sport that consists of 2 teams, hockey. The field for each team consists of 11 players, which each player uses a stick to play the ball. The aim of this game is to score a goal by putting the ball into the opponent's goal from the shooting circle area (circle), and defending their own goal from conceding the ball, the team that puts more balls into the opponent's goal from the shooting area than the opponent puts in the ball is the winner of the match hockey (Ismail et al., 2017) (Porkes et al., 2022) (Khotimah et al., n.d.). Games hockey is a sport that has many basic techniques. Game development hockey Now that it is played on synthetic fields, more and more basic techniques must be trained to be able to keep up with developments in the game hockey modern games that are played today (In'am Attaqi, 2016) (Budiman et al., 2022). Game development hockey create experts in sports hockey continue to develop the game hockey, until now the development of the position of the player structure in the game hockey now consists of the positions of goalkeeper, defender (inside right defender, inside left defender, outside right defender, outside left defender), midfielder (central midfielder, left midfielder, right midfielder), and attacking player (center attacking player, left attacking player, right attacking player) (Rifki et al., 2022) (Rahayu & Daulay, 2021)

The structure of the game when controlling the ball consists of four sets of defensive player positions which are shaped like a bowl where there are 2 central defenders who are positioned lower than the 2 outside left and outside right defenders. Three players are in the middle position and always make a triangle position (not in a parallel position), three players are in the front

position and always form a triangle position (not in a parallel position) (Firdani Auliya et al., n.d.; Sari et al., n.d.).

Based on the expression above, the researcher made observations on the team hockey outdoor North Sumatra when playing with the West Kalimantan team had a 4-1 advantage for the North Sumatra team, while the North Sumatra team and the Central Java team had a 4-0 advantage for the North Sumatra team when taking part in the National Championship which was held in Jakarta Senayan on 3-11 December 2022, the results of the researcher's observations found several things related to the North Sumatra team in the championship:

1. The North Sumatra team was able to control more of the game compared to the opposing team with statistics of 60% controls the game mastered by the North Sumatra team.
2. The athlete's ability to play events 1 against 2, 2 against 2, 2 against 3, 3 against 3, is still in the poor category.
3. The goal chance obtained is influenced by utilization of good opportunities by the North Sumatran team, the goals scored occurred in the 3rd and 4th quarters (between minutes 31-60).

The problems raised are influenced by many factors, one of which is the most dominant factor influencing it, namely being influenced by the athlete's competition experience, which is still small. This is influenced by the small number of championships held in Indonesia and in the region, but in coaching it is related to efforts to increase the athlete's competition experience. So one solution that now exists in several sports, especially football, is to provide training methods for small -sided games (Sanjaya & Faruk, 2021) (Raden Dadan Pra Rudiana & Arif Fajar Prasetyo, 2024) (Dewi & Faridah, 2022). This is the basis

for researchers wanting to create forms of training small sided games in sports hockey (Artikania et al., n.d.). In an effort to improve the quality of playing abilities hockey North Sumatra athletes, one of them is by providing new training models which are expected to provide faster improvements compared to the old training models that have been used so far, in this case one of the approach models is using small sided games more numerous and varied (Al Ghani et al., 2021) (Fitriyah et al., 2024) (Endriani et al., 2024; Lian et al., 2018; Maulana & Anam, 2023; Moya-Ramon et al., 2022). Based on the coach's expectations which have been expressed from the results of interviews with the coach, the researcher conducted a needs analysis to obtain more complete information, following are the results of the needs analysis that the researcher conducted with North Sumatra hockey coaches and coaches as follows:

Table 1. Results of Answers to the Trainer Needs Analysis

No	Question	Percentage	
		A(YA)	B (NO)
1	Have you ever read a book related to sports? hockey	90%	10%
2	Ever read a book about basic techniques in the game hockey	70%	30%
3	Have a sportsbook hockey related to basic techniques in the game hockey	20%	80%
4	Never read a sports book hockey related to the discussion small sided games	10%	90%
5	I would like to get a book related to small	90%	10%

sided game in the game hockey			
5	Books related to small sided game is a book that has the latest studies that can improve athletes' basic technical and playing abilities	90%	10%

Based on this, the quality of a player is seen from the athlete's ability to carry out techniques in the game hockey in game conditions, so in an effort to reach the player, One of the efforts of this elite field is to provide a form of playing approach training by solving cases in actual games. This statement makes researchers want to conduct research related to “Variation Development Small Sided Games In Game Hockey”

METHODS

This type of research is research and development (Research and Development). Research and development methods are research methods used to produce certain products, and test the effectiveness of these products (Sugiyono, 2010) (Fitria Hidayat, 2021) (Okpatrioka, 2023). (Supriadi & Mesnan, 2022) (Kratus, 2010) (Klassen et al., 2024; Navi & Khasanah, 2023) states that development can be interpreted as a process or steps to develop a new product or improve an existing product. Research and development is a type of research that is oriented towards the product being developed. In this development research, the product developed is an instructional video media model for training small sided games on sports hockey. The training media will later be packaged into a book.

Research Instrument

An instrument is a tool used to measure observed natural or social phenomena. The instrument for collecting data in this development research is to use a questionnaire (Dewi et al., 2022) (Bangun & Tarmizi, n.d.; Lalu Hulfian, 2022). To measure attitudes, opinions and perceptions of a person or group, a scale can be used Likert. Questionnaire given to respondents to obtain data about the level of media suitability in the form of numbers as a basis for carrying out product revisions. This questionnaire consists of answer choices: very good (4), good (3), poor (2) and very poor (1).

Data collection in this development research uses open questionnaires and closed questionnaires, which on the next page are accompanied by a suggestion column. The questionnaire was given to lecturers who are learning media experts, trainers or material expert lecturers, and athletes.

Data Analysis Techniques

Data obtained through trial activities is classified into two, namely quantitative data and qualitative data. Quantitative data in the form of assessments is collected through questionnaires. Meanwhile, qualitative data in the form of suggestions put forward by media experts and athletes was then collected to improve this video tutorial.

The qualitative data analysis technique in this research uses descriptive statistics, in the form of statements Not feasible, not feasible, quite feasible, feasible, which is converted into quantitative data on a scale of 4, namely by scoring from numbers 1 to 4.

Table 2. Percentage Analysis of Evaluation Results by Subject Trials

No	Score In Percentage	Qualification Category
1	0-20%	Totally Not Worth It
2	21%-40%	Not Worth It
3	41%-60%	Decent Enough
4	61%-80%	Worth it
5	81%-100%	Very Worth It

RESULT

The result of this development research is to produce a product, namely Small Exercise Side Game Hockey. Small Practice Side Game Hockey which was developed was declared very feasible. This research was carried out at the Medan State University Hockey Field where the subjects in this research were North Sumatran Hockey Athletes preparing for PON 2024. This research took place from June 2024 to July 2024. The subjects in this research included: in small group trials in 10 North Sumatra Hockey athletes preparing for PON 2024, 20 athletes in Hockey.

Product Trial

At this stage, researchers conducted field trials using Small Side Game Hockey (Draft II). Field trials were carried out in two stages, namely limited field trials (readability tests) and operational field trials. Based on the data from the trial results, the researchers carried out an evaluation to improve Small Training sided game hockey. The following are the results of the first field trial:

Table 3 Small Group Trials

No	No	Amount	Percentage
1	Haris Fadila Siregar	34	85%
2	Nanda Ibnasia Rahman	33	82.5%
3	Arlinus Z's son	36	90%
4	The Ultimate King of Rambe	36	90%
5	Ardhi Afriansyah	34	85%
6	Zulkifli Simamora	32	80%
7	Juan Sebastian Veron is manic	35	87.5%
8	Thiarma Sirat	33	82.5%
9	Indah Siti Sarah Saragih	36	90%
10	Masriana Sirait	33	82.5%
	Total	342	855
	Percentage	85.5%	213.75

Based on the results of trials on athlete respondents for small groups carried out on 10 hockey athletes from North Sumatra, where a score of 342 was obtained with a percentage of 85.5%, the Small Training product sided game hockey in the very worthy category. The following is a description of the results of the athlete assessment points:

- 1) A very interesting SDGH variation was obtained with a percentage of 88% (very decent).
- 2) The SDGH variation provided benefits to me with a percentage of 83% (very feasible).
- 3) The SDGH variation increased my ability as a hockey athlete

by a percentage of 85% (very feasible).

- 4) The SDGH variation is easy to obtain with a percentage of 95% (very feasible).
- 5) SDGH variations can be used to form a defensive position for a hockey game with a percentage of 90% (very feasible).
- 6) I can easily practice scoring goals with a percentage of 80% (very feasible).
- 7) Small sided games to improve decision making in front of wickets are taken at a rate of 80% (very decent).
- 8) Small-sided games not only train technique but also strategy in playing hockey, obtained with a percentage of 88% (very decent).
- 9) Small sided games train athletes' physical condition, especially endurance and arm strength, with a percentage of 85% (very feasible).
- 10) This Small sided games exercise book is of great use if it is owned by athletes and is obtained with a percentage of 83% (very decent).

Final Product Revision

After the operational field test process is carried out and a review of the product is obtained small sided game hockey, the evaluation results obtained from 3 experts showed that the variations developed were in accordance with the existing conceptual and operational definitions. So it can be said that all forms of basic technical training small sided game hockey 24 variations have been developed that can be used by coaches to train basic techniques for North Sumatra Hockey athletes.

Athletes' responses to 24 exercise variations in Small Training sided game

hockey developed in operational field tests of 10 hockey athletes and 20 hockey athletes. It was found that: all athletes responded well to the form of training developed so that there was no need to revise the 24 variations of training developed so that this research could be used by hockey athletes to practice basic techniques.

DISCUSSION

Based on the results of the needs analysis for coaches and coaches, the quality of players is seen from the athlete's ability to perform techniques in the game hockey in game conditions, so in an effort to reach the player hockey One of the efforts of this elite field is to provide a form of training in playing approaches by solving cases in actual games,

Data Collection

This stage is intended to obtain data that supports the truth of the problem found. This can be done through observation, interviews, and conducting an initial needs analysis. This stage was carried out by researchers during the training activities of the North Sumatra hockey team whose training camp was at the Unimed field and when the North Sumatra hockey team took part in the National Championship in December 2022. The following data collection findings are:

Researchers made observations on the team hockey outdoor North Sumatra when playing with the West Kalimantan team had a 4-1 advantage for the North Sumatra team, while the North Sumatra team and the Central Java team had a 4-0 advantage for the North Sumatra team when taking part in the National Championship which was held in Jakarta Senayan on 3-11 December 2022, The North Sumatra team was able to control the game more than the opposing team

with statistics of 60% of the game being controlled by the North Sumatra team. The athlete's ability to play events 1 against 2, 2 against 2, 2 against 3, 3 against 3, is still in the poor category.

Product Design

This research product was designed on 24 deep training models of small sided game hockey, where each exercise has an image design in the form of animation and there are tools needed for a variety of exercises, training procedures and game rules. Internal products small sided game This is in the form of a book completely designed by the author.

Design Validation

Based on the first stage of testing, the results of the SGD expert assessment showed that a percentage of 81.29% was obtained in the very feasible category. Then the material expert trial obtained a percentage of 77.08% with the appropriate category. The expert trainer trial obtained a percentage of 79.16% in the feasible category.

Design Revision

The author redesigned the cover so that the final cover looked more attractive and carried out according to expert advice to change the image to a more attractive one. Based on the picture above, the author has revised the product design where initially the field was just a regular square and hockey players only used circles. Now the product design is more organized with a model of a hockey player with animation. The width of the field has also been edited, which is 10 meters wide and 5 meters long. The author has shortened the game time in 1 product which was shortened by 5 minutes to 10 minutes, previously the author played the game with a time span of 10-15 minutes.

Product Trial

Based on the results of trials on athlete respondents for small groups carried out on 10 North Sumatran hockey athletes, where a score of 342 was obtained with a percentage of 85.5%, the Small Training product sided game hockey in the very worthy category.

Product Revision

Based on the second stage of testing, the results of expert assessment of small-sided game hockey showed that the percentage obtained was 93.75% in the very feasible category. Then the material expert trial obtained a percentage of 91.67% with a very feasible category. The hockey coach expert test obtained a percentage of 89.98% with a very feasible category. After carrying out the second stage of expert assessment, the Small Practice product sided game hockey This did not receive revision from experts.

Trial Use

Based on the results of large group trials carried out on the Unimed hockey field where the total score obtained was 718, with a percentage of 89.75% (Very Eligible).

Final Product Revision

After the operational field test process is carried out and a review of the product is obtained small sided game hockey, the evaluation results obtained from 3 experts showed that the variations developed were in accordance with the existing conceptual and operational definitions. So it can be said that all forms of basic technical training small sided game hockey 24 variations have been developed that can be used by coaches to train basic techniques for North Sumatra Hockey athletes.

Athletes' responses to 24 exercise variations in Small Training sided game hockey developed in operational field

tests of 10 hockey athletes and 20 hockey athletes. It was found that: all athletes responded well to the form of training developed so that there was no need to revise the 24 variations of training developed so that this research could be used by hockey athletes to practice basic techniques. .

Mass Production

Development of basic technical exercises in small sided game hockey This is done through various stages in accordance with research and development procedures. The final production of this research will be published in book form.

CONCLUSION

Based on research results and discussion of training development Small Side Game Hockey it can be concluded that:

1. Practice Development Small Side Game Hockey developed as many as 24 variations of basic athlete technique training hockey of 24 exercises small side game hockey, 10 can be used as a beginner's exercise to practice the basic techniques of the hockey game.
2. This research produces basic technical training for hockey players which is varied, so it can be used to master athletes' basic techniques compiled in the form of a guidebook.

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