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Integration of life skills through aquatic activities in the context of positive youth development (pyd)
Integración de habilidades para la vida a través de actividades acuáticas en el contexto del desarrollo positivo de la juventud (pyd)

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Abstract. This research aims to analyze the improvement in life skills between teenagers who are given a life skills program and teenagers who are not given a life skills program in aquatic games at adolescence which are integrated with positive youth development. This research adopts a quantitative approach that integrates life skills and positive youth development through aquatic games. The population used in this research were students from the Aquatic Student Activity Unit (UKM) at Garut University and the research sample was determined using a total sampling technique using all 20 students who took part in the Aquatic UKM. The research instrument used was the life skills scale for sport (LSSS) questionnaire, development iThis instrument was given to samples with an age range of 17-21 years, namely teenagers, then the samples were randomly selected to determine the experimental and control groups between the groups that were given the life skills program and the groups that were not given the life skills program. This instrument contains 8 indicators of life skills, namely, teamwork, goal setting, time management, emotional skills, intrapersonal communication, social skills, leadership, problem solving and decision making.The data analysis used in this research includes the normality test, homogeneity test, and hypothesis test by processing the data using the statistical product for social science (SPSS) version 25 program. The research results were obtained with a calculated T value of 3,496 > T table 2,101, so Ho rejected and Ha accepted, so it can be concluded that there is an increase in life skills between teenagers who were given the life skills program and teenagers who were not given the life skills program. This confirms that the life skills program which is integrated with positive youth development through aquatic games has an important meaning in the quality of human resources in teenagers in carrying out their daily activities.
Keywords: Aquatic Activities, Adolescents, Life skills, Positive Youth Development (PYD).

Resumen. Esta investigación tiene como objetivo analizar la mejora en las habilidades para la vida entre los adolescentes que reciben un programa de habilidades para la vida y los adolescentes que no reciben un programa de habilidades para la vida en juegos acuáticos en la adolescencia que se integran con el desarrollo juvenil positivo. Esta investigación adopta un enfoque cuantitativo que integra habilidades para la vida y el desarrollo juvenil positivo a través de juegos acuáticos. La población utilizada en esta investigación fueron estudiantes de la Unidad de Actividades Estudiantiles Acuáticas (UKM) de la Universidad Garut y la muestra de la investigación se determinó mediante una técnica de muestreo total utilizando los 20 estudiantes que participaron en la UKM Acuática. El instrumento de investigación utilizado fue el cuestionario Life Skills Scale for Sport (LSSS), desarrollo i. Este instrumento se aplicó a muestras con un rango de edad de 17 a 21 años, es decir, adolescentes, luego las muestras fueron seleccionadas al azar para determinar los grupos experimentales y de control entre los grupos que recibieron el programa de habilidades para la vida y los grupos que no recibieron el programa de habilidades para la vida. Este instrumento contiene 8 indicadores de habilidades para la vida, a saber, trabajo en equipo, establecimiento de metas, gestión del tiempo, habilidades emocionales, comunicación intrapersonal, habilidades sociales, liderazgo, resolución de problemas y toma de decisiones. El análisis de datos utilizados en esta investigación incluye la prueba de normalidad, prueba de homogeneidad. y prueba de hipótesis mediante el procesamiento de los datos utilizando el programa de producto estadístico para ciencias sociales (SPSS) versión 25. Los resultados de la investigación se obtuvieron con un valor T calculado de 3,496 > T tabla 2,101, por lo que Ho rechazó y Ha aceptó, por lo que se puede concluir que existe un aumento en habilidades para la vida entre los adolescentes que recibieron el programa de habilidades para la vida y los adolescentes que no recibieron el programa de habilidades para la vida. Esto confirma que el programa de habilidades para la vida que se integra con el desarrollo positivo de los jóvenes a través de los juegos acuáticos tiene un significado importante en la calidad del recurso humano de los adolescentes en el desempeño de sus actividades diarias.
Palabras clave: Actividades Acuáticas, Adolescentes, Habilidades para la vida, Desarrollo Juvenil Positivo (PYD).

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Introduction

The era of globalization is an era where technology plays a very important role and influences the development of millennials, so there are many challenges, obstacles and changes that must be made in the current era of Society 5.0 and must be carried out by educational units as the main gateway in preparing superior human resources (Amran et al., 2023). The issue of globalization has become the biggest problem point in the world, so information technology has revolutionized people's lives with the ease of communicating and interacting digitally (Trisnadi et al., 2023). Easy access to smartphones tends to increase the level of addiction in teenagers which can affect their health and social interactions (Cleary et al., 2020). Increasing human resources through a teacher or school principal requires improvement and development in developing human resources on a wider scale at national and international levels in a sustainable manner so that they are able to answer the challenges of the industrial world or face the era of industrial revolution 4.0 and society 5.0 (Nugroho et al., 2022). The trend of increasing cases of

gadget/device/smartphone addiction among teenagers is related to high internet use, based on survey results from the Indonesian Internet Service Providers Association (APJII) in 2021 that the number of internet users in Indonesia has reached 210 million.In the latest survey findings, it was found that the internet penetration rate in Indonesia grew by 77.02%, there were 210,026,769 people out of a total of 272,682,600 Indonesian people connected to the internet in 2021.In terms of age, the 13-18 year old group surfs the internet the most, followed by the 19-34 year old group.years, the difference is quite slight and the 35-54 year age group is an age group that does not really understand internet usage.In line with the rapid development of technology, all information can be received easily by all levels of society, from children to adults, and it cannot be denied that the information received is not only limited to positive information, but negative information is the biggest challenge in using the internet (Kogoya et al., 2023). This is a form of individual self-defense in order to be able to improve the quality and quality of human resources to be able to compete in the demands of the era of globalization(Rohmanasari et al., 2019). All information can be received easily by all levels of society from children to adults as technology develops very rapidly, so that individuals and groups need to improve the quality of human resource development (Utami et al., 2023).

Adolescence is the most critical period for individuals with the desire to try new things. Adolescence shows the transition stage from childhood to adulthood which is marked by physical, cognitive, emotional and social changes (Shim, 2019). The information obtained is very influential for a person or individual on development, both positive development and negative development (Salafi et al., 2022). Therefore, life skills play an important role in individual development which can be interpreted as the development of physical, cognitive, affective abilities and social roles in society which enable a teenager to live life in a different environment (Yuniana et al., 2023). Life skills are assets, values and psychological skills that enable individuals to effectively handle challenges in everyday life (Kendellen et al., 2017). Thus, it can be concluded that life skills are assets, values, problem control, emotional control and positive behavior (Jufrianis et al., 2021). Teenagers need to be involved in positive activities, one of which is physical activity. The function of physical activity is to improve individual character and values when combined with a life skills program (Brunelle et al., 2007). Therefore, sport plays a very important role in the positive development of teenagers (Adji et al., 2022).

Physical activity is an important part of human life (Pratama et al., 2022). In adolescence, it is identified as an appropriate means to facilitate the positive development of adolescents, related to personal fulfillment in terms of physical, psychological and social development, assisting in becoming individuals who are ready to face the next life to be applied in life (Bean et al., 2020). Therefore, teenagers with all their activities will benefit from participating in physical activities that support the development of positive physical activity for teenagers in their environment. In the field of sports, increasing youth participation is very important because it helps develop teenagers' personalities or prepares the younger generation to be competent and productive enough to be able to face life's challenges (Hardianto et al., 2022). Physical activity is about persistence in learning new skills and requires hard work and collaboration to solve problems and make decisions (Cope et al., 2017). Therefore, adolescence is the most appropriate time to obey and equip oneself with positive things that have been conceptualized in Positive Youth Development (PYD) (Hastuti et al., 2021). Positive youth development (PYD) is an aspect of life that views adolescence as an extraordinary asset in human development, so that it can be developed towards a deficit approach that can reduce negative behavioral problems in today's teenagers (Kendellen et al., 2017). Reducing youth involvement in risky behavior is at the core of the PYD framework, it is a new vision that challenges traditional views of youth. Youth development based on physical activity or sport-based youth development (SBYD) through physical activity programs promotes the quality of youth or improves not only physical performance but also contributes to the psychosocial development of the younger generation (Jacobs & Wright, 2018). From the above, it is clear that the development of the younger generation is positively related to life skills.

Life skills apply growth to survive, grow and develop, being able to communicate and build relationships individually and in groups. Indonesia's Human Development Index (HDI) is ranked 102nd out of 105 countries. HDI is a composite index which is an average measure of the main achievements in three fundamental dimensions of human development, namely: 1) long and healthy life, 2) knowledge and 3) good standard of living(Normawati, 2016). Formally, skills education is provided at vocational education institutions, both at vocational schools at the secondary level and at diploma and polytechnic education programs at the university level (Patty & Zakarias, 2021). In addition, the United Kingdom through the General National Vocational Qualification requires all its citizens to have the following basic skills: communication, personal skills, problem solving, information technology, and modern languages *(Ryan et al., 2015).* The life skills instrument that was successfully developed shows that life skills have 8 components as follows; teamwork, goal setting, time management, emotional skills, interpersonal communication, social skills, leadership and problem solving and decision making (problem solving and decision making)(Cronin & Allen, 2017). Life skills programs can be implemented through physical activity programs which are used as a way to provide experiences that encourage self-evaluation and teach or develop life skills in adolescents (Nopembri et al., 2022). Therefore, aquatic activities are one of the physical activities that can be developed to develop integrated life

skills in the context of positive youth development (PYD) (Saifu et al., 2021). Aquatic activity is a form of physical activity that can be done outside of school learning hours in the form of extracurricular activities as a means of developing achievement which is very important for children's social development (Sutapa et al., 2021). Choosing the right physical activity for children will help improve children's physical growth and development, because at school, for example, children often sit quietly and listen to the teacher talk, rather than actively moving and conveying ideas. will also be very useful. affect children's intelligence (Ilham et al., 2021). In fact, children's talents can be discovered from an early age (Sukendro et al., 2021). With optimal stimulation, children can develop their swimming abilities through aquatic activities. Because apart from being a means of helping children achieve success, aquatic activities are also useful in looking after themselves (Listyarini et al., 2021).

Aquatic activities carried out by children are very beneficial and have the potential to develop or encourage positive adolescent development (PYD), because in aquatic activities children will have a spirit of tolerance, self-control and discipline (Yudhistira et al., 2021). Therefore, aquatic activities are considered recreational sports and to find out how to improve life skills through various forms of learning, games and exercises in aquatic activities in addition to teaching and learning activities (KBM) at school (Nasrulloh et al., 2022). Improving or developing life skills through physical activity is very important because life skills are one of the goals in forming students' character (Kristiyanto et al., 2020). Enables teenagers to be physically active and improves their fitness, contributing to psychosocial development by encouraging the development of life skills and encouraging motor control (Trottier & Robitaille, 2014). Therefore, in this research we want to know the quality of life skills through aquatic activities in order to realize Positive Youth Development (PYD) (Nasrulloh et al., 2021). The remainder of this paper is organized as follows: Section 2 reviews all materials and methods, Section 3 presents the results, Section 4 provides a discussion of the study and finally Section 5 concludes the findings with some directions for future research.

Materials and methods

The research method used in this research aims to reveal, describe and conclude solutions to the problems raised in the background, so we used an experimental research method with a pretest posttest control group design research design (Sugiyono, 2013).

Table 1. Research design

Sample	Pretest	Treatment	Posttest
R	O1	X	O1
R	O2	-	O2

The research we conducted required a number of objects to be studied by determining the research population. The population of this research were students who took part in the Aquatic Student Activity Unit (UKM) at Garut University, and the sample used was a total of 20 participants.Based on this statement, the sample in this study was 20 men and women who were divided into two sample groups, namely the experimental group (n= 10 people) and the control group (n= 10 people) which were divided randomly.

Research instruments are an important point in research which function to obtain the data examined in a study, because basically research is a process of proving the variables that will be assessed through research instruments, so research requires valid and reliable measuring instruments. The research instrument used was the Life Skills Scale for Sport (LSSS) questionnaire instrument.(Cronin & Allen, 2017). This instrument was developed for sports participants with an age range of 9-19 years. This instrument contains 8 life skills, namely, teamwork, goal setting, time management, emotional skills, intrapersonal communication, social skills, leadership, problem solving and decision making, divided into 47 questions using a Likert scale with a 5 point scale range, namely from 1 (not at all) to 5 (very much).

Table 2.
Life Skills Instrument Indicator

Indicator	Sub Indicator
Cooperation	Work together with a team
	Help the team to carry out tasks
	Receive suggestions from the team
	Cooperate with others for the good of the team
Goal Setting	Helps make targets to improve the game
	Provide a challenge
	Assessing goal achievement
	Create short-term goals to achieve long-term goals
	Commit to the goal
	Determine training goals
	Determine specific goals
Time Management	Manage your time well
	Know how much time to spend on activities
	Control time usage
	Make goals so you can use them effectively
Emotional Skills	Knowing how to deal with emotions
	Understanding behavior can be different when emotional
	Pay attention to the feelings you are feeling
	Pay attention to emotions to stay focused
	Knowing other people's emotions
	Pay attention to other people's feelings
	Helping other people who are emotional to stay focused
	Helping others stay in control of their emotions
Social Skills	Speak clearly
	Pay attention to the words said to others
	Pay attention to the movements made by other people
	Communicate well
Leadership	Set standards for the team
	Knowing how to motivate
	Help solve other people's performance problems
	Be a good role model
	Organize team members to work together
	Recognize the achievements of others
	Know how to influence team members positively
	Take team members' opinions into account
Problem Solving and Decision Making	Thinking about a problem together
	Compare each problem solution
	Make troubleshooting as much as possible
	Evaluate problem solving

The form of experiment carried out in this research was treatment carried out in 14 meetings, experiments were

carried out to get good results, so they were carried out with a training frequency of 3 days/week. Meanwhile, the duration of training is at least 4-6 weeks(Agi Ginanjar, Adang Suherman, Tite Juliantine, 2018). In this research, there were 12 meetings and two meetings for the pretest and posttest. Our research data processing uses Microsoft Excel 2006 and IBM SPSS version 25 statistical software. There are several main tests in the normality test, namely, Kolmorov-Smirnov Test, Liliefors Test, and Shapiro-Wilk Test, because the sample size of this study is less than 50 samples. Interpretation of normality test results uses the method of looking at the significance value (sig.) or probability (p-value) in the Shapiro Wilk Test of Normality table and then comparing it with the alpha (α) significance level of 0.005. The homogeneity test aims to determine whether research data has the same or homogeneous variance. In this study, the Levene Statistics homogeneity test was used using SPSS version 25.

Table 3.
Basis for Normality Test Decision Making

Criteria	Decision
If the Sig value. Or P-value > 0.005.	Data is normally distributed.
If the Sig value. Or P-value < 0.005.	Data is not normally distributed.

Table 4.
Basis for Homogeneity Test Decision Making

Criteria	Decision
If the Sig value. Or P-value > 0.005.	Data is homogeneously distributed.
If the Sig value. Or P-value < 0.005.	The data is not homogeneously distributed.

Independent Sample t-Test In hypothesis testing using the t-test. After the data is entered, the data can be processed using the t-test formula as follows:

a. $$t_{count} = \frac{X_1 - X_2}{\sqrt{\frac{S_1}{n_1} + \frac{S_2}{n_2}}}$$ b.ttable = n1+n2-2

Table 5.
Basis for making t test decisions

Criteria	Decision
If the t-count value > t table.	Ho is rejected, meaning there is a difference..

Results

The results of the research that has been carried out are presented by processing the data results that have been determined, the researchers found various data that are ready to be processed, analyzed and concluded. With initial data in the form of sample demographic data as follows:

Table 6.
Research Sample Demographics

Data	Mean	elementary school	Min	Max	N
Age	16.2	1.01	15	17	20
TB	164.3	6.29	155	175	
BB	61.5	3.14	55	65	
BMI	18.71	0.62	16.98	19.35	

Based on table 6 demographics regarding the description of the research sample, the measurement results showed that the average age of the sample was 16.2 years, the average height was 164.3 cm, the average weight was 61.5 kg and the average body mass index was 18.71 (Normal). An overview of the Body Mass Index (BMI) of the research sample can be seen in Figure 1 regarding the Body Mass Index Pie Chart diagram of the research sample.

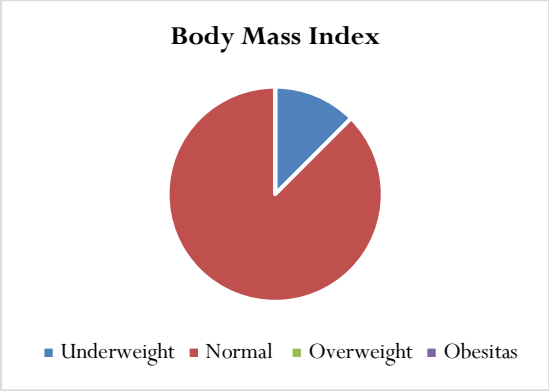

Figure 1. Pie Chart Body Mass Index Diagram for Research Samples

The raw data above is initial data as a reference that the participants/samples used have a good body mass index, then analyzed first before the samples are treated randomly so that each group has the same opportunity in determining the group in the research being carried out. Therefore, calculations and statistical data analysis were carried out using SPSS to find the expected results. To simplify the analysis results and avoid the possibility of errors, the data analysis process in this research uses Microsoft Excel. The results of processing and analysis of life skills data are described in the following table:

Table 7.
Initial Group Data

Group	*Pre-Test*				*Post-Test*			
	Score	Mean	elementary school	N	Score	Mean	elementary school	N
Experiment	1063	106	20.07	10	2101	210.1	8.69	10
Control	1381	138	28.73	10	1379	138	20.07	10

In table 7 with a sample size of 10 people for each group, it can be seen that the pre-test data in the experimental group had a total score of 1063, an average of 106, a standard deviation of 20.07. and for the post-test the experimental group had a score of 2101, an average of 210.1, a standard deviation of 8.69. Meanwhile, the pre-test data in the control group had a total score of 1381, an average of 138, a standard deviation of 28.73. and for post-test data the control group had a total score of 1379, average 138, standard deviation 20.07.

Table 8.
Pretest, Posttest and N Gain Values for Life Skills Components

Component	N Test Items	*Pretest*	*Posttest*	*N Gains*
Cooperation	7	176	321	145
Goal setting	7	164	312	148
Time Management	4	84	183	99
Emotional Skills	8	171	350	179
Social Skills	5	110	216	106
Interpersonal Communication	4	86	183	97
Leadership	8	181	358	177
Problem solving & decision making	4	95	178	83

In table 8 above, we analyze eight components of life skills. Component one, teamwork has a pre-test score of 176, post-test 321, and N Gain 145. Component two, goal setting has a pre-test score of 164, post-test 312, and N Gain 148. Component three, management time has a pre-test score of 84, post-test 183, and N Gain 99. Component four, emotional skills has a pre-test score of 171, post-test 350, and N Gain 179. Component five, social skills has a pre-test score -test was 110, post-test 216, and N Gain 106. Component six, interpersonal communication had a pre-test score of 86, post-test 183, and N Gain 97. Component seven, leadership had a pre-test score of 181, post-test 358, and N Gain 177. Component eight, problem solving & decision making has a pre-test score of 95, post-test 178, and N Gain 83.

After a description of the research data was obtained, then a data normality test was carried out. The normality test is carried out to determine whether the research data is normally distributed or not. In this study, researchers used the Kolmogrov-Smirnov test on SPSS version 25 software. According to normality rules, the significance level (p) is greater than 0.05. (5% significance level) then the data is normally distributed, conversely if the significance level (p) is smaller than 0.05 then the data is not normally distributed.

Table 9.
Life Skills Data Normality Test

Tests of Normality							
		Kolmogorov-Smirnova			Shapiro-Wilk		
	Group	Statistics	df	Sig.	Statistics	df	Sig.
Life Skills Development	Pre-Test Experiment	,206	10	,200*	,910	10	,281
	Post-Test Experiment	,287	10	,020	,751	10	,038
	Control Pre-Test	.137	10	,200*	,944	10	,599
	Control Post-Test	,241	10	.102	,832	10	,035

Based on table 9 above, it is known that the pre-test results for the experimental group have a significance value of 0.281 > 0.05 and the post-test results for the experimental group have a significance value of 0.038 > 0.05, so it can be interpreted that the data is normally distributed. Meanwhile, the pre-test in the control group had a significance value of 0.599 > 0.05 and the post-test results in the control group had a significance value of 0.35 < 0.05, so it could be interpreted that the data was normally distributed.

The homogeneity test is carried out to determine whether the data is homogeneous or inhomogeneous. This parametric technique assumes that samples are obtained from populations with equal variance, meaning that the scores for each group are similar. In the homogeneity test using Levene's. The basis for decision making used is:

1. If the Sig value is >0.05, then the data distribution is homogeneous
2. If the Sig value is <0.05, then the data distribution is not homogeneous

Table 10.
Homogeneity Test

	Data Group	Levene's	Sig.	Information
Development Life Skills	Experiment	4,301	0.53	Homogeneous Data
	Control	14.55	0.10	

From table 10 above, the data homogeneity results obtained using Levene's analysis show that the data for developing life skills through sports, experiments with a sig value of 0.53 > 0.05, means the distribution is homogeneous. And for the control group with a sig value of 0.10 > 0.05, the control data distribution is declared homogeneous.

The Independent Sample t-test was carried out to determine whether there was a difference in improving life skills between teenagers who were given the life skills program (experimental group) and teenagers who were not given life skills (control group). So the data obtained is as follows:

Table 11.
Description Data

Statistical Source	Swimming Training Model	
	Life Skills	*Non Life Skills*
N	10	10
S	8.05	16.22
$\bar{X}$	158	138

If the t-count value > t-table then Ho is rejected, meaning there is a difference.

If the t-count value < t-table then Ho is accepted, meaning there is no difference.

Based on the data above, it can be seen that the calculated t value is 3.496 > t table 2.101, so Ho is rejected and Ha is accepted, so it can be concluded that "There is a difference in the increase in life skills between teenagers who are given a life skills program and teenagers who are not given a life skills program." This confirms that the life skills program in aquatic activities is very effective to implement, thus the hypothesis is tested and can be accepted.

Discussion

The development strategies designed by us as in this research can intentionally increase a child's ability to transfer his life skills beyond other physical activities. Researchers act as controllers of youth life skills programs in aquatic activities. The swimming life skills program takes place in 14 sessions, each session is 90 minutes long, enough to develop life skills for teenagers. The next step, the researchers analyzed the group that was not given the life skills program, it was found that the group that was not

given the life skills program experienced an implicit increase even though the average value of improvement was lower than the group that was given the life skills program. It can positively help athletes to learn life skills that can be transferred into non-physical activity settings or transferred into everyday life.

There are eight life skills components, namely teamwork, goal setting, time management, emotional skills, social skills, interpersonal communication, leadership, problem solving and decision making (Sutapa et al., 2020). Among them, the life skills component with higher development is the emotional skills component. These emotional skills can be developed further because these skills refer to biological and psychological conditions and refer to the tendency to act in such a way that with this reference the ability of students to perceive themselves, understand and appreciate themselves can arise (Nasrulloh et al., 2020). Apart from the ability to provide reference stimuli, students can also stimulate the emergence of the ability to control emotions and the ability to solve personal problems. The program designed in this research is the same as teaching life skills, namely by integrating its components to teenagers (Danish et al., 2004). Emotional skills are considered the most important aspect of an aquatic activity program (Nugroho et al., 2021). Meanwhile, the lowest component of life skills is the component of problem solving and decision making, because at a young age the decision making ability becomes weaker because the nature of the skill is that it still has many choices and hopes for more. The decisions made produce consequences from the decisions chosen, so that in adolescence solving decision-making problems is still difficult (Garnefski et al., 2009).

Therefore, the results of this study indicate that the high participation in youth aquatic activities at the Garut University Student Activity Unit (UKM) can encourage teenagers to develop life skills. Researchers believe that physical activity really helps teenagers develop life skills. Sports-based youth development (SBYD) through sports programs produces a quality young generation(Jacobs & Wright, 2018). Therefore, this research was conducted to fulfill the research objectives to be achieved in the form of increasing life skills between teenagers who benefit from the life skills program and teenagers who do not benefit from the life skills program. This means that when implementing the life skills program in the aquatic program, the results achieved were higher compared to the group that did not take part in the life skills program. Intentionally designed youth sports facilitate positive youth development better than inadvertently designed environments(Bean & Forneris, 2016).To teach life skills optimally, it is necessary to focus on specific skills in each lesson (i.e. having life skills) which are mentioned several times throughout the lesson. Additionally, daily living skills can be targeted in multiple lessons by covering the same current living skill in at least two lessons in one program. The reason for focusing on one life skill at a time in several lessons is to allow teens to devote the effort and attention necessary to successfully learn this skill(Kendellen et al., 2017).

The importance of teaching life skills in adolescent physical activity, this allows adolescents to have more opportunities because they have an environment that can support such as leadership, self-development skills and encourage beneficial results from the development of physical activity models through Positive Youth Development (PYD) in the future will come. The proposed 7C model addresses the need for new PYD indicators that are developmentally appropriate and culturally applicable(Syvertsen et al., 2021).The 7Cs model has been proposed and validated in several cross-cultural studies, indicating that the 7Cs supplemented with creativity have the potential to optimize and enliven PYD scholarship in broader aspects of developmental growth by considering development and related conceptual concepts. Conceptually, fundamental theoretical and empirical contributions have demonstrated that creativity enhances social and emotional development, positive identity, and well-being. From a developmental perspective, creativity reflects a process involving various stages of development with age-related similarities in childhood, adolescence and adulthood as areas of generalization across various cultural and social contexts.(Yong et al., 2020). The 7C model argues that when all 7Cs are promoted and experienced by young people, they have the potential to optimize broader aspects of growth, well-being and development. When the context fosters competence (academic, social, and career skills), confidence (sense of mastery, positive identity, and self-esteem), character (integrity, ethical commitment, and adaptive utility, problem-solving skills, and personal values), connection (meaning welfare in a social and cultural context with community, friends, family and school), caring (empathy and sympathy), contribution (community/social volunteerism, helping involvement) and creativity (productive adaptability, problem solving), evidence of improved behavior positive when there are fewer signs of problem behavior(Manrique-millones et al., 2021).

Life skills development activities in sports programs are designed to encourage positive development of the younger generation. Sports psychology researchers have defined life skills as physical and cognitive behavioral skills that are necessary to meet the demands of daily life and must be transferred to other areas of life (Pierce et al., 2017). Swimming activities can be integrated with life skills to create a positive young generation as can beillustrated through the figure 2. From the picture above, data is obtained to analyze the eight components of life skills. Component one, teamwork has a pre-test score of 176, post-test 321, and N Gain 145. Component two, goal setting has a pre-test score of 164, post-test 312, and N Gain 148. Component three, management time has a pre-test score of 84, post-test 183, and N Gain 99. Component four, emotional skills, has a pre-test score of 171, post-test 350, and N Gain 179. The fifth component, social skills, has

a score pretest 110, posttest score 216, and N Gain 106. The sixth component, interpersonal communication, has a pretest score of 86, posttest score 183 and N Gain 97. Dimension seven, leadership, has a pretest score of 181, posttest score of 358 and N score The gain is 177. The eighth dimension, problem solving and decision making is determined, has a pre test score of 95, a post test score of 178 and an N Gain of 83. The superior life skill components in aquatic activities are emotional skills and leadership. The subjects of this research are teenagers who have positive experiences and take part in aquatic programs, so that the way they learn life skills or the process of measuring physical activity is more than just simple achievements but there are many things that can be a process to achieve them through self-development and can be successful as individuals, able to do physical activity and provide a positive impact as interests, talents and dreams for the future develop, what the subject experiences is becoming accustomed to the target or time and load during training. There are many targets applied by the coach through training hours, training intensity, number of swims achieved above 50 meters.(Hudaya et al., 2019). However, in the discussion of this research, there is still a need to develop each component of life skills towards other physical activities in order to support positive youth development (PYD), so that the impact that will be received by teenagers in every daily activity will be able to implement the 7Cs components in the long term. through various research that can develop continuously.

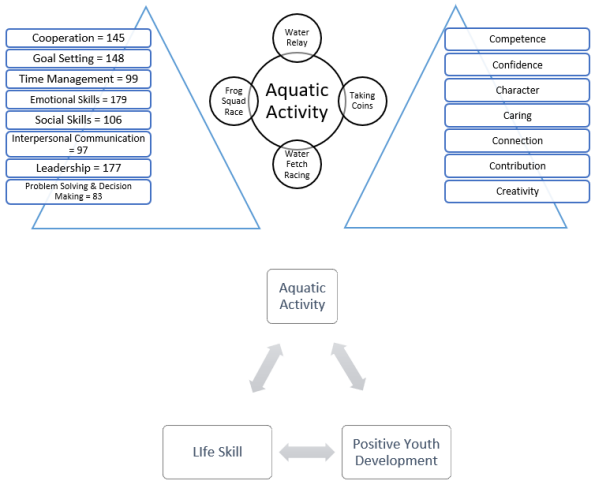

Figure 2. Integrated 7Cs Positive Youth Development model

Conclusions

The aim of our research is to analyze the improvement in life skills between teenagers who are given a life skills program and teenagers who are not given a life skills program in aquatic games at adolescence that are integrated with positive youth development. "The results of this research analysis showed that there was an increase in life skills between teenagers who were given the life skills program and teenagers who were not given the life skills program." This confirms that the life skills program in aquatic activities is very effective to implement, thus the hypothesis is tested and can be accepted. The higher value components of life skills in aquatic activities are emotional and leadership skills in the 8 components specified in the research instrument (Kauki et al., 2024; Salafi et al., 2023)). This influences the younger generation to gain positive experiences and participate well in aquatic programs, so that the way they learn life skills or the process of measuring physical activity is not just about achievement but also many things that can be a process to achieve it (Trisnadi et al., 2024; Riyana et al., 2024). through personal development and the ability to succeed as an individual, can practice physical activity and have a positive impact on the development of interests, talents and future dreams thereby developing personal skills in developing positive 7Cs for teenagers. consciously applied in everyday life (Pratama et al., 2024; Arifin et al., 2024). Based on research results, aquatic programs are well integrated with the life skills of research subjects as supporting positive youth development programs, therefore, it can be concluded that improving life skills through aquatic programs in the context of positive youth development is successful with two components of emotional and leadership skills out of the eight components listed. used. Further research with different variables is needed to strengthen and confirm the findings in this study and overcome any limitations. Thus, this research becomes a strong basis for developing further research in other areas of physical activity to support the achievement of positive youth development indicators in society that are innovative, effective and implicative. Apart from that, this research provides recommendations so that future researchers can involve a larger sample size and conduct further research to analyze and produce a better number of life skill components and integrate them with several other physical activities in the context of positive youth development (PYD).

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Conflict of interest

We are aware of no conflicts of interest associated with this publication, and there was no significant financial

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References

Adji, T. P., Mansur, Putro, K. H., Pratama, K. W., & Mustapha, A. (2022). Analysis of the Influence of Service Quality and Audience Loyalty Interest in the Volleyball Tournament Events: A Case Study of Tulungagung Regency. *In Human-Centered Technology for a Better Tomorrow:* Proceedings of HUMENS 2021 (pp. 299-311). Springer Singapore.

Agi Ginanjar, Adang Suherman, Tite Juliantine, YH (2018). Journal of Physical Education and Sports. Sport Physical Education, 3(1), 122–128. http://ejournal.upi.edu/index.php/penjas/index

Amran, Suherman, W. S., Graha, A. S., Rizqie, A., Riyana, A., Astuti, A. T., Utami, D. Y., Pratama, K. W., Sonjaya, A. R., Permadi, A. A., Arifin, Z. Karakauki, M., Ali, S. K. S., Trisnadi, R. A., Asmuddin, Utami, D. (2023). Developing Learning Media for an Online Learning-Based Big Ball Game at Class XI Vocational High School Students: Feasibility and Efficacy. *Retos*, *50*, 724-736. DOI: 10.47197/retos.v50.99235

Arifin, Z., Mulyana, R. B., Sutresna, N. ., Subarjah, H. ., Sawali, L. ., Pratama, K. W., Sonjaya, A. R., Ali, S. K. S., Hasan, S. N., Hasan, S. N., Mustapha, A. ., Razali, M. N., Sutapa, P. ., Karakauki, M. ., & Hardianto, D. (2024). The effect of modification of movement in training on students' swimming competence. *Challenges*, *51*, 949–954. https://doi.org/10.47197/retos.v51.101338

Bean, C., & Forneris, T. (2016). Examining the Importance of Intentionally Structuring the Youth Sport Context to Facilitate Positive Youth Development. Journal of Applied Sport Psychology, 28(4), 410–425. https://doi.org/10.1080/10413200.2016.1164764

Bean, C., Kramers, S., & Harlow, M. (2020). Exploring life skills transfer processes in youth hockey and volleyball. International Journal of Sport and Exercise Psychology, 0(0), 1–20. https://doi.org/10.1080/1612197X.2020.1819369

Brunelle, J., Danish, S. J., & Forneris, T. (2007). The impact of a sport-based life skills program on adolescent prosocial values. Applied Developmental Science, 11(1), 43–55. https://doi.org/10.1080/10888690709336722

Cleary, M., West, S., & Visentin, D. (2020). The Mental Health Impacts of Smartphone and Social Media Use. Issues in Mental Health Nursing, 41(8), 755–757. https://doi.org/10.1080/01612840.2020.1748484

Cope, E., Bailey, R., Parnell, D., & Nicholls, A. (2017). Football, sport and the development of young people's life skills. Sport in Society, 20(7), 789–801. https://doi.org/10.1080/17430437.2016.1207771

Cronin, L.D., & Allen, J. (2017). Development and initial validation of the Life Skills Scale for Sport. Psychology of Sport and Exercise, 28, 105–119. https://doi.org/10.1016/j.psychsport.2016.11.001

Danish, S., Forneris, T., Hodge, K., & Heke, I. (2004). Enhancing youth development through sport. World Leisure Journal, 46(3), 38–49. https://doi.org/10.1080/04419057.2004.9674365

Garnefski, N., Koopman, H., Kraaij, V., & ten Cate, R. (2009). Brief report: Cognitive emotion regulation strategies and psychological adjustment in adolescents with a chronic disease. Journal of Adolescence, 32(2), 449–454. https://doi.org/10.1016/j.adolescence.2008.01.003

Hardianto, D., Budiningsih, C. A., Pratama, K. W., Ali, S. K. S., & Karakauki, M. (2022). Assessing the Experience-Sharing Parenting Method through Online Learning during Covid-19 Pandemic. *International Journal of Instruction*, *15*(4).

Hastuti, T. A., Jatmika, H. M., Pratama, K. W., & Yudhistira, D. (2021). The Level of Understanding of Pedagogical Competence of Physical Education, Health and Recreation Students of Sports Science Faculty. *Physical Education Theory and Methodology*, *21*(4), 310-316.

Hudaya, P., Ma'mun, A., & Hidayat, Y. (2019). Integration of Life Skills into Swimming Training Programs. Educentric, 4(3), 150. https://doi.org/10.17509/educentric.v4i3.379

Ilham, M., Iqroni, D., Karakauki, M., Ali, S. K. S., Kristiyanto, A., Nasrulloh, A., … & Phytanza, D. T. P. (2021). Effects of resistance band exercise on student's freestyle swimming skills. *Sport Science*, *15*(1).

Jacobs, J. M., & Wright, P. M. (2018). Transfer of Life Skills in Sport-Based Youth Development Programs: A Conceptual Framework Bridging Learning to Application. Quest, 70(1), 81–99. https://doi.org/10.1080/00336297.2017.1348304

Jufrianis, J., Henjilito, R., Hernawan, H., Sukiri, S., Sukur, A., Abidin, D., … & Wahyudin Pratama, K. (2021). The Effect of Knowledge Level (IQ) and Physical Conditions (Power, Flexibility and Coordination) on Smash Technique Learning Skill in Sepak Takraw. *Physical Education Theory and Methodology, 21*(3), 264-272.

Kauki, M. K., Prasetyo, Y., Rismayanthi, C., Asmuddin, A., Saman, A. ., Razali, M. N., Mustapha, A., Ali, S. K. S., Hutkemri, H., Sutapa, P. ., Hardianto, D., Auliana, R., Utami, D. ., Utami, D. Y., Riyana, A. ., Amran, A., Pratama, K. W., Trisnadi, R. A., & Astuti, A. T. . . (2024). Effect of Basic Water Confidence, Flexibility, and Technique on Freestyle Swimming Skill among Elementary School Pupils. *Challenges*, *51*, 1415–1423. https://doi.org/10.47197/retos.v51.101599

Kendellen, K., Camiré, M., Bean, C.N., Forneris, T., & Thompson, J. (2017). Integrating life skills into Golf Canada's youth programs: Insights into a successful research to practice partnership. Journal of Sport Psychology in Action, 8(1), 34–46. https://doi.org/10.1080/21520704.2016.1205699

Kogoya, T., Mutohir, C., Pramono, M., Kristiyanto, A., Putro, B. N., Ali, S. K. S., … & Trisnadi, R. A. (2023). Developing the Value of Peace in Sport, Health, and Physical Education Lecture through Traditional Games. *International Journal of Human Movement and Sports Sciences*, *11*(2), 268-275.

Kristiyanto, A., Prasetyo, Y., Pratama, K. W., Karakauki, M., Mustapha, A., & Idrus, S. Z. S. (2020, April). Access to The Utilization of Science and Technology of Sports and Familiarity of the Sports Community towards Technologically Based Devices. In *Journal of Physics: Conference Series* (Vol. 1529, No. 2, p. 022099). IOP Publishing.

Listyarini, A. E., Oktaviani, A. D., Alim, A., Putro, K. H., Kristiyanto, A., Margono, A., & Pratama, K. W. (2021). ВЗАЄМОЗВ'ЯЗОК ВИКОРИСТАННЯ ЦИФРОВИХ МЕДІА ТА ФІЗИЧНОЇ АКТИВНОСТІ З ФІЗИЧНОЮ ПІДГОТОВЛЕНІСТЮ УЧНІВ 4-ГО ТА 5-ГО КЛАСІВ ПОЧАТКОВОЇ ШКОЛИ. *Theory and Methods of the Physical Education*, *21*(3), 281-287.

Manrique-millones, D.L., Pineda-marin, CP, & Millones-

rivalles, R.B. (2021). The 7Cs of Positive Youth and Peru : A Promising Model ynpoesuwliav on e R rs eproynpooecswluei na v Re rso epr o.

Nasrulloh, A., Deviana, P., Yuniana, R., & Pratama, K. W. (2021). The Effect of Squat Training and Leg Length in Increasing the Leg Power of Volleyball Extracurricular Participants. *Physical Education Theory and Methodology*, *21*(3), 244-252.

Nasrulloh, A., Prasetyo, Y., Nugroho, S., Yuniana, R., & Pratama, K. W. (2022). The effect of weight training with compound set method on strength and endurance among archery athletes. *Journal of Physical Education and Sport*, *22*(6), 1457-1463.

Nasrulloh, A., Prasetyo, Y., Nugroho, S., Yuniana, R., Pratama, K. W., Mustapha, A., & Idrus, S. Z. S. (2020, April). Tricet Method to Increase the Hypertrophy Muscle. In *Journal of Physics: Conference Series* (Vol. 1529, No. 3, p. 032006). IOP Publishing.

Nopembri, S., Rismayanthi, C., Putro, K. H., Kristiyanto, A., Margono, A., Karakauki, M., & Pratama, K. W. (2022). Improvement of HOTS method in basketball game through TGFU learning. *Physical Education Theory and Methodology*, *22*(1), 85-91.

Normawati, N. (2016). Development of Student Life Skills Instruments. Journal of Educational Evaluation, 7(2), 130–143. https://doi.org/10.21009/jep.072.07

Nugroho, S., Hidayat, R. A., Komari, A., Pratama, K. W., Karakauki, M., & Ali, S. K. S. (2022). Effect of Plyometric Exercise and Leg Muscle Endurance on the Agility and VO2max of Badminton Athletes. *Physical Education Theory and Methodology*, *22*(3s), S71-S78.

Nugroho, S., Nasrulloh, A., Karyono, T. H., Dwihandaka, R., & Pratama, K. W. (2021). Effect of intensity and interval levels of trapping circuit training on the physical condition of badminton players. *Journal of Physical Education and Sport*, *21*, 1981-1987.

Patty, W.G., & Zakarias, J.D. (2021). THE ROLE OF EDUCATION IN IMPROVING HUMAN RESOURCES AT SMA NEGERI 1 TAMPAN AMMA IN TALAUD. 14(2), 1–17. https://ejournal.unsrat.ac.id/index.php/holistik/article/download/34453/32350

Pierce, S., Gould, D., & Camiré, M. (2017). Definition and model of life skills transfer. International Review of Sport and Exercise Psychology, 10(1), 186–211. https://doi.org/10.1080/1750984X.2016.1199727

Pratama, K. W., Aman, M. S., Sutoyo, E., Karakauki, M., Ali, S. K. S., Mustapha, A., … & Nasrulloh, A. (2022). An Alternative Soft Set Approach for Identifying Football Conflict: A Case Study of Indonesian Football Super League. *International Journal on Advanced Science, Engineering and Information Technology, 12*(4), 1351-1364.

Pratama, K. W., Suharjana, S., Nasrulloh, A., Sabrin, L. O. M. ., Pranata, D. ., Pambayu, S. H. ., Hardianto, D. ., Sutapa, P. ., Auliana, R. ., Karakauki, M. ., Utami, D. ., Riyana, A. ., Astuti, A. T. ., Utami, D. Y. ., Trisnadi, R. A. ., Amran, A., Ali, S. K. S. ., Mustapha, A. ., Razali, M. N. ., Sonjaya, A. R. ., Permadi, A. A. ., & Arifin, Z. . (2024). RED-S Identification on Female Athlete. *Challenges*, *51*, 1055–1061. https://doi.org/10.47197/retos.v51.101322

Riyana, A., Sutapa, P. ., Hardianto, D., Pratama, K. W., Utami, D. ., Auliana, R. ., Utami, D. Y. ., Trisnadi, R. A., Astuti, A. T. ., Karakauki, M. ., Amran, A., Ali, S. K. S. ., Suhartini, B. E., Nopembri, S., Irianto, J. P., Razali, M. N., & Mustapha, A. (2023). The Correlation of Socio-Economic Status towards Participation of Rafting Doers. *Challenges*, *52*, 225–231. https://doi.org/10.47197/retos.v52.101850

Rohmanasari, R., Ma'mun, A., & Muhtar, T. (2019). The Impact of Extracurricular Activities on the Development of Life Skills in High School Students. Journal of Educational Research, 18(3), 371–382. https://doi.org/10.17509/jpp.v18i3.15009

Ryan, Cooper, & Tauer. (2015). Achievement Learning Through Life Skill Education On Basic Competency. Journal of Educational Studies, 3(life skills), 12–26.

Saifu, M. K., Ali, S. K. S., Mustapha, A., Muslim, B. A., Ismiyati, F., Sundara, C., … & Yudhistira, D. (2021). The Effect of Small Game Exercise on Freestyle Swimming Speed: A Case Study of Halu Oleo University Sport Science Student. *International Journal of Human Movement and Sports Sciences*, *9*(6), 1040-1045.

Salafi, M. I. E., Suherman, W. S., Suhartini, B., Antoni, M. S., & Pratama, K. W. (2022). Effect of the Eight-Week Sand Surface Exercise, Water Surface Exercise, and Power Leg Muscles Training Methods Toward Agility of Basketball Players for Adolescent Players. *Physical Education Theory and Methodology*, *22*(3), 353-359.

Salafi, M. I. E., Suherman, W. S., Suhartini, B., Antoni, M. S., Pratama, K. W., Nurfadhila, R., Nugroho, W., & Miftachurohmah, Y. (2023). Design, Validation, and Reliability of a Basketball Skill and Performance Test Instrument in Adolescent Players. *Physical Education Theory and Methodology*, *23*(5), 668–677. https://doi.org/10.17309/tmfv.2023.5.03

Shim, J. Y. (2019). How do the dynamics of shame influence smartphone addiction of Korean Christian adolescents? A study based on external and internal shame. Mental Health, Religion and Culture, 22(3), 293–304. https://doi.org/10.1080/13674676.2019.1618804

Sugiyono. (2013). Quantitative, qualitative, and R&D Research Methods. Alphabet.

Sukendro, S., Karakauki, M., Ali, S. K. S., Kristiyanto, A., Pratama, K. W., Nasrulloh, A., … & Phytanza, D. T. P. (2021). THE RELATIONSHIP BETWEEN NUTRITIONAL STATUS AND PHYSICAL HEALTH LEVELS OF STUDENTS AT THE MODERN ISLAMIC BOARDING SCHOOL. *Sport Science*, *15*(1).

Sutapa, P., Prasetyo, Y., Pratama, K. W., Karakauki, M., Mustapha, A., & Idrus, S. Z. S. (2020, April). Motor Development Index (MDI) Based on Combination of Human Development Index (HDI) and Sport Development Index (SDI) as a Success Parameter of Motor Development among Preschool Children: An Observational Study. In *Journal of Physics: Conference Series* (Vol. 1529, No. 3, p. 032003). IOP Publishing.

Sutapa, P., Pratama, K. W., Rosly, M. M., Ali, S. K. S., & Karakauki, M. (2021). Improving motor skills in early childhood through goal-oriented play activity. *Children*, *8*(11), 994.

Syvertsen, A.K., Scales, P.C., & Toomey, R.B. (2021). Developmental Assets framework revisited: Confirmatory analysis and invariance testing to create a new generation of assets measures for applied research. Applied Developmental Science, 25(4), 291–306. https://doi.org/10.1080/10888691.2019.1613155

Trisnadi, R. A., Ambardini, R. L., Kushartanti, B. W.,

Hardianto, D., Sutapa, P., Manil , K., Amran, A., Auliana, R. ., Utami, D. ., Utami, D. Y. ., Riyana, A. ., Astuti, A. T. ., Trisnadi, S. ., Widiyanto, B., Trisnani, S. M. ., Ulayatilmiladiyyah, N., Sarosa, H., Wahyudin Pratama, K. ., Ali, S. K. S. ., Sonjaya, A. R. ., Permadi, A. A., & Arifin, Z. (2024). El efecto del extracto de semilla de Salvia Hispánica L sobre los niveles de azúcar en sangre en ratas con actividad física moderada (The Effect Salvia Hispanica L Seed Extract on Blood Sugar Levels in Rats with Moderate Physical Activity). *Retos*, *51*, 117–123. https://doi.org/10.47197/retos.v51.99236

Trisnadi, R. A., Kushartanti, B. M. W., Ambardini, R. L., Trisnadi, S., Trisnani, S. M., Ulayatilmiladiyyah, N., Karakauki, M., Amran, Rizqie, A., Utami, D., Utami, D. Y., Riyana, A., Astuti, A. T., Sutapa, P., Ali, S. K. S., Pratama, K. W., Sonjaya, A. R., Permadi, A. A., Arifin, Z. (2023). Effect of Chia Seed Extract (Salvia Hispanica L) On Current Blood Sugar Levels and MDA Levels. *Retos*, *50*, 826-830. DOI: 10.47197/retos.v50.99237

Trottier, C., & Robitaille, S. (2014). Fostering life skills development in high school and community sport: A comparative analysis of the coach's role. Sport Psychologist, 28(1), 10–21. https://doi.org/10.1123/tsp.2012-0094

Utami, D., Sukarmin, Y., Widiyanto, Pribadi, A., Kristi, P. D., Utami, D. Y., Amalia, I. G., Pinandita, W. W., Amran, Auliana, R., Trisnadi, R. A., Astuti, A. T., Karakauki, M., Riyana, A., Pratama, K. W., Naufal, R. M. (2023). Reducing the feelings of work fatigue for women kindergarten teachers by implementing circulo massage. *Fizjoterapia Polska*, *23*(2); 168-174.

Yong, K., Mannucci, P. V., & Lander, M. W. (2020). Fostering creativity across countries: The moderating effect of cultural bundles on creativity. Organizational Behavior and Human Decision Processes, 157(February 2018), 1–45. https://doi.org/10.1016/j.obhdp.2019.12.004

Yudhistira, D., Suherman, W. S., Wiratama, A., Wijaya, U. K., Paryadi, P., Faruk, M., … & Pratama, K. W. (2021). Content Validity of the HIIT Training Program in Special Preparations to Improve the Dominant Biomotor Components of Kumite Athletes. *International Journal of Human Movement and Sports Sciences*, *9*(5), 1051-1057.

Yuniana, R., Tomoliyus, B. M., Nasrulloh, A., Pratama, K. W., Rosly, M. M., Karakauki, M., & Ali, S. K. S. (2023). The Effectiveness of the Weight Training Method and Rest Interval on VO2 max, Flexibility, Muscle Strength, Muscular Endurance, and Fat Percentage in Students. *International Journal of Human Movement and Sports Sciences*, 11(1), 213-223.

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