## Children's play activities viewed from the geographical location aspect Actividades lúdicas infantiles vistas desde el aspecto de la ubicación geográfica \*Gusril, \*Anton Komaini, \*Fitrah Arrasyih, \*\*Toho Cholik Mutohir, \*\*\*Mohd Salleh Aman, \*Ahmad Chaeroni, \*Heru Andika \*Universitas Negeri Padang (Indonesia), \*\*Universiti Malaya (Malaysia), \*\*\*Universitas Negeri Surabaya (Indonesia)

Abstract. The problem of this research is the low level of children's play activity in terms of geographical location. This can be seen from the category of children's play activities in the city of Padang which is in the sufficient category. This is because parents are too overprotective of their children in playing activities. Parents are more likely to have their children help their parents work, study and recite the Koran. The objectives of this research: (1) To reveal children's play activities from the highlands; (2) To reveal the play activities of lowland children; (3) To reveal children's beachside play activities; (4) To reveal the effectiveness of children's play activities in terms of highland, lowland and beachside aspects. This research method uses comparative quantitative research (comparison). The research population was highland elementary school students (Tanah Datar Regency), lowland (Padang City), Padang Experimental State Elementary School students, Kampung Jawa Elementary School students, Pariaman City (coastal plain). Samples were drawn using purposive sampling and a sample of 106 people were obtained from the highlands, lowlands and seaside. The instrument used to measure Gusril's Play Activities contains closed questions on a Likert scale with a validity of 0.69 and a reliability of 0.94 as well as open questions to capture data that has not been captured by a closed questionnaire for children in the highlands (Bukittinggi), lowland (Padang City) and the beach (Kota Pariaman). The data analysis technique for this research uses Descriptive and Inferential Oneway Anova statistics to test the effectiveness of children's play activities. Based on data analysis and discussion, the following research results can be concluded: (1) Highland children's play activities are in the very good category; (2) Lowland children's play activities are in the sufficient category; (3) Beachside children's play activities are in the sufficient category; (4) Highland children's play activities are more effective than lowland and beachside areas. (5) There is no significant difference between lowland and beachside play activities. It is recommended that parents give their children the opportunity to play because playing is a child's human right according to the 2003 Geneva Sports and Health Conference.

Keywords: Children's play activities, geographical location, highlands, lowlands, edges.

Resumen. El problema de esta investigación es el bajo nivel de actividad lúdica de los niños en términos de ubicación geográfica. Esto se puede ver en la categoría de actividades de juego infantil en la ciudad de Padang, que se encuentra en la categoría suficiente. Esto se debe a que los padres sobreprotegen demasiado a sus hijos durante las actividades de juego. Es más probable que los padres hagan que sus hijos ayuden a sus padres a trabajar, estudiar y recitar el Corán. Los objetivos de esta investigación: (1) Revelar las actividades lúdicas de los niños de la sierra; (2) Revelar las actividades lúdicas de los niños de las tierras bajas; (3) Revelar las actividades de juego de los niños en la playa; (4) Revelar la efectividad de las actividades de juego infantil en términos de aspectos de tierras altas, tierras bajas y playas. Este método de investigación utiliza investigación cuantitativa comparativa (comparación). La población de investigación fueron estudiantes de escuelas primarias de las tierras altas (Tanah Datar Regency), estudiantes de tierras bajas (ciudad de Padang), estudiantes de la escuela primaria estatal experimental de Padang, estudiantes de la escuela primaria Kampung Jawa, ciudad de Pariaman (llanura costera). Las muestras se tomaron mediante muestreo intencional y se obtuvo una muestra de 106 personas de la sierra, las tierras bajas y la costa. El instrumento utilizado para medir las Actividades Lúdicas de Gusril contiene preguntas cerradas en escala Likert con una validez de 0,69 y una confiabilidad de 0,94 así como preguntas abiertas para capturar datos que no han sido capturados por un cuestionario cerrado para niños de la sierra (Bukittinggi), las tierras bajas (ciudad de Padang) y la playa (Kota Pariaman). La técnica de análisis de datos para esta investigación utiliza estadísticas descriptivas e inferenciales Oneway Anova para probar la efectividad de las actividades de juego de los niños. Con base en el análisis y la discusión de los datos, se pueden concluir los siguientes resultados de la investigación: (1) las actividades de juego de los niños de las Tierras Altas se encuentran en la categoría muy buena; (2) Las actividades de juego de los niños de las tierras bajas están en la categoría suficiente; (3) Las actividades de juego para niños en la playa están en la categoría suficiente; (4) Las actividades de juego de los niños de las tierras altas son más efectivas que las de las zonas bajas y costeras. (5) No existe una diferencia significativa entre las actividades de juego en las tierras bajas y en la playa. Se recomienda que los padres den a sus hijos la oportunidad de jugar porque jugar es un derecho humano del niño según la Conferencia de Salud y Deporte de Ginebra de 2003.

Palabras clave: Actividades lúdicas infantiles, ubicación geográfica, tierras altas, tierras bajas, bordes.

Fecha recepción: 24-07-24. Fecha de aceptación: 09-08-24 Gusril gusril@fik.unp.ac.id

# Introduction

Children are active individuals and are always in confrontation with their environment. They cannot stay still and are always on the move. Almost all stimuli that come from the environment are answered with movement (Gusril and Muthohir, 2019; Komaini, Gusril, et al. 2024). Playing is an activity that can improve physical conditions, for example in terms of strength, increasing speed and endurance, balance, elasticity and so on. Playing activities can also develop imagination, focus, making decisions, concluding things, being alert when doing something, being able to complete various things. things immediately and find options to resolve the problem. Games can build social values in children, this is because games often require coordination with friends and understanding each other. Playing can also have an impact on emotional changes, so that a child can express all emotions and reduce the problems they face (Panggi, M.L & Komaini, A 2020)

Encourage children's participation in planning and

evaluating activities and making choices about what they can make or play. According to Gusril (2016) playing activity is an activity that provides physical fitness and psychological pleasure through physical activity. A feeling of pleasure arises if the person playing or all those playing really do it. If a member is not playing seriously, it means that he is not happy playing or perhaps his physical condition is not healthy.

According to Gusril (2017) the values contained in playing activities include: mental values, physical values and social values. In terms of mental values, children can know their rights and respect other people, trust each other among their playmates, and recognize their own shortcomings when compared to other people. In terms of physical value, playing activities are useful for the growth and development of children both in terms of physical, mental and emotional function. Social value in playing activities consists of learning to give and receive from playing opponents, measuring the strength, ability, intelligence and tenacity of other people. In carrying out playing activities, the person is faced with quite a large choice of forms of play, according to the environment and the state of the facilities and infrastructure available. Gusril (2017) states that forms of play include: (a) social play; (b) playing with objects; (c) socio-dramatic play. Playing games can be categorized into two forms, namely: individual games and group games played indoors or outdoors.

West Sumatra is one of the provinces in Sumatra which is known for its natural beauty. West Sumatra has great potential in the tourism sector, both natural tourism, cultural tourism and agrotourism. West Sumatra has been used as one of the main targets for Indonesian tourism since last year. Geographical location is the location of an area in terms of reality on the earth or the position of that area on the globe compared to the position of other areas (Astana, 2018)

Indonesia in general and Sumatra Baarat in particular has 3 types of altitude areas, namely highlands, lowlands and coastal areas. Topography or relief is the high-low condition of the land or surface and its slope (Banowati, 2013). The theory explains that children learn through interaction with the environment, which the environment provides and offers to improve the child's abilities. In other words, opportunities (toys, equipment, events, spaces) that provide a stimulating relationship between the environment and the individual to create meaningful behavior. An environment with sufficient stimulation, learning opportunities and positive incentives has a positive effect on accelerating the development of stable motor skills, movements and manipulation tasks (Valadi & Gabbard, 2020).

The plateau is a plain located at an altitude above 700 meters above sea level. Large plains that are located in high or mountainous areas are called highlands. The plateau was formed as a result of erosion and sedimentation. Basically, the air in the plateau area still feels cool. Plateaus are also called plateaus. Plateaus can also be formed by the former

large caldera, which is buried by material from the surrounding mountain slopes. In highland areas, the air temperature is much cooler than temperatures in the lowlands and the level of air humidity and rainfall is also sufficient. higher compared to lowland areas and in highland areas the air pressure is higher than in lowland areas, so there is little oxygen (Sholikin & Wirawan, 2019). Negeri 26 Singgalang Elementary School is a public elementary school located in Sikadunduang hamlet, Ganting, Singgalang, X Koto District, Tanah Datar Regency, West Sumatra at an altitude of 1260 meters above sea level.

The lowlands are a wide expanse of land with a height measured from sea level up to 200 meters above sea level with temperatures during the day that can reach 35°C and at night 24°C (Ardistain, 2017). Meanwhile, Iskandar (2011) explains that the lowlands are a wide expanse of land with a relatively low altitude measured from sea level, namely around 200-300 meters above sea level. The term lowland is applied to any area with a wide and relatively flat expanse. Air temperatures in the lowlands, especially in Indonesia, range between 23-28 degrees Celsius throughout the year. Padang Experimental State Elementary School is a state school located on Jl Gurun No 67, Ujung Gurun, West Padang District, Padang City, West Sumatra, located in the lowlands with a height of 6 meters above sea level.

The beach is the boundary between the land area and the sea area. Land areas are areas located above and below the land surface starting from the highest tide line. Meanwhile, the ocean area is the area located above and below sea level starting from the sea side at the lowest low tide line, including the seabed and the part of the earth beneath it (Bambang Triatmodjo, 2008). State Elementary School 01 Kampung Jawa Kota Pariaman is a school located in Kampung Jawa I, Central Pariaman District, Pariaman City, West Sumatra, located in the coastal area with a height of 4 meters above sea level.

Living at high altitudes requires different adaptive, molecular, physiological and anatomical mechanisms (Ortiz-Prado, Encalada, et al., 2022). Anatomical changes including chest depth and wide chest have been described among highland natives (Xi et al., 2016; Komaini, Andika, et al. 2024). Children born at high altitudes have a wider chest circumference than children born at sea level (Ortiz-Prado, Mendieta, et al., 2022; Gusril et al. 2024). All changes generally result in better ventilation and increased spirometry values when compared to individuals living at sea level (Kiyamu et al., 2015; López Jové et al., 2018). Among healthy people living at different altitudes, it has been shown that lung volumes are generally higher in individuals living at high altitudes than in those living at sea level (Weitz et al., 2016) and in children living at high altitudes. tall people tend to have a shorter body stature than children who live in lowland areas and coastal areas (Santos et al., 2020). Lowland can be interpreted as an area that is sloping or flat. Lowland is an area that is lower than the surrounding area (Kasenda, 2014). Lowlands are parts

of the earth's surface that are flat and low with a height of 0-200 meters above sea level.

In general, all low-lying areas at average sea level are referred to as coastal areas (Abdurrahim & Hariadi, 2018). The coastal zone refers to the geographical area that includes terrestrial and submerged coastal areas and is delineated administratively for coastal zone management (Finkl 2016). Coastal areas, on the other hand, broadly refer to the extent of coastal processes and the ecosystems they support without limitation to geographic intensity or specific spatial boundaries (Hossain et al., 2020). Coastal areas are areas where land and sea meet landward. Coastal areas include parts of land, both dry and submerged in water, which are still influenced by sea properties such as: tides, sea breezes and sea water seepage.

These days, children have busy schedules, and the constraints of lack of space and mobility that exist in city and village life, lack of risk, adventure and healthy eating patterns (Valentini et al., 2016; Rasyid et al. 2024). The daily activities of each child in each geographical environment will be different (de Chaves et al., 2016). Children who live in highland areas tend to pass through roads and environments that tend to go up and down due to geographical conditions. On the other hand, children who live in lowland areas tend to pass through flat roads and environments due to geographical conditions, which is in line with the results of research conducted by (Padli Akbar, Gusril, Fahmil Haris, 2019; Komaini, Satria, et al. 2024). This causes children in the highlands to have a better level of strength because they are trained compared to children in the lowlands and on the coast. Gusril et al (2024) stated that children in the highlands have better motor skills than those in the lowlands and on the coast. Children who live on the coast have higher motor skills than those in lowland areas. This is also influenced by children's daily activities which are influenced by the geographical environment, showing that children in the highlands tend to go through more challenging curves, going up and down as a result of geographic conditions, while children in the lowlands go through more difficult roads. flat, while children on the

# Results

Based on play activity data collected using questionnaires distributed to students, data on children's play activities in the highlands obtained the highest value of 133 and the lowest value of 105. The average value of play activities in the highlands was 122.5 and the standard deviation was 6. 11. For more details, see table 1:

	X7 1	Frequency	
No	Value	Absolute	Relative (%)
1	> 132	1	2%
2	127 - 132	10	24%
3	120 - 126	14	33%
4	114 - 119	9	21%
5	<113	1	2%
	Amount	35	100%

beach do coastal activities such as swimming. For this reason, research was carried out on children's play activities from geographical locations. With this research, it can certainly be revealed that playing activities are also influenced by geographical factors.

## Method

This research is classified as quantitative research using comparison analysis techniques. This research explores children's play activities in highland locations (Singgalang Elementary School) Tanah Datar Regency, lowland areas of Experimental State Elementary School, Padang City, State Elementary School 01 Kampung Jawa, Pariaman Municipality on the coast. This research was carried out in three places, namely: the highlands (Singgalang State Elementary School) Tanah Datar Regency, the lowlands of the Experimental State Elementary School in Padang City, the State Elementary School 01 Kampung Jawa Pariaman Municipality (beachside). The research will be carried out from June to August 2024.

The population of this study were students from the Singgalang State Elementary School, Tanah Datar Regency (highlands), the Padang City Experimental State Elementary School (lowlands) and the 01 Kampung Jawa Elementary School, Pariaman City (beachside). Samples were drawn using purposive sampling techniques and obtained 115 elementary school students, 35 people from highland, lowland plans 42 person and coastal plains 38 person), from the research results, the samples taken came from Minang culture, and were aged 10-11 years, whose thinking level was concrete operational.

The research instrument used was a play activity questionnaire developed by Gusril (2004) with a validity of 0.64 and a reliability of 0.98, In addition, observations and interviews were also used regarding children's play activities. The data analysis technique used is Oneway Anova. Before data analysis, the Normality analysis requirements were tested using the Kolmogorov Smirnov test and Linearity test

# Highlands Children's Play Activities Lowland Children's Play Activities

Based on play activity data collected using questionnaires distributed to students, the highest score for play activity in the lowlands was 116 and the lowest score was 74. The average score for play activities in the lowlands was 96.61 and the Standard Deviation was 9.54. For more details, see table 2:

Table 2.	
Lowland Children's Play Activitie	es

N-	Value	Frequency	
No		Absolute	Relative (%)
1	> 132	4	10%
2	127 - 132	11	26%
3	120 - 126	15	36%
4	114 - 119	9	21%
5	<113	3	7%
	Amount	42	100%

## **Beachside Children's Play Activities**

Based on play activity data collected using questionnaires distributed to students, the highest score was obtained at the beach of 116 and the lowest score was 74. The average value was 94.97 and the Standard Deviation was 11.04. For more details, see table 3:

Table 3 Beachside Children's Play Activities

N	¥7 1	Frequency	
No	Value	Absolute	Relative (%)
1	> 132	3	7%
2	127 - 132	6	14%
3	120 - 126	20	48%
4	114 - 119	7	17%
5	<113	2	5%
	Amount	38	100%

## Normality Test

This Normality test uses the Kolmogorov Smirnov test with the SPSS 27 program. Normality testing using the Kolmogorov Smirnov test is carried out with the help of Microsoft Excel and is the basis for decision making.

Sig	P-Value	Information
0,200		
0,200	0,05	Normal
0,136		
	0,200 0,200	0,200 0,200 0,05

If the Ltable value > Lcount, then the data is normally distributed.

If the Ltable value  $\leq$  Lcount, then the data is not normally distributed Based on the data above, the value obtained for each variable is smaller than Value = 0.05. It can be concluded that the data on children's play activities is normally distributed

### Linearity Test

The Linearity Test aims to see whether each data is Lowland (X1), Highland (X2), and Coastal Edge (X3).

Table 5.

Linearity Test			
Uji Linieritas	Sig.	P-Value	Information
Lowland Children's Play Activities (X1)	0,447		
Highlands Children's Play Activi- ties (X2)	0,529	0,05	Linier
Beachside Children's Play Activi- ties (X3)	0,395	_	
If $d \in \mathbb{C}$ , $1 \to \infty = 0.05$ , $d \to -1$	< F(11) d d	1.6 1 1:	

If the Sig value  $> \alpha = 0.05$  or the Fcount value < Ftable, then the data is linea

If the Sig value  $<\alpha=0.05$  or the Fcount value > Ftable, then the data is not linear

Based on the above, the Sig value is obtained. >  $\alpha = 0.05$ . In other words, it can be concluded that the variables tend to form a straight line (linear).

Table 6.

NOVA Test		
Uji ANOVA	Sig.	P-Value
X1 dan X2	0,000	
X1 dan X3	0,737	0,05
X2 dan X3	0,000	

If the Sig. >0.05, then the average is the same

If the  $Si_{2} < 0.05$ , then the averages are different Basis for decision making post hoc tests. If the Sig value, > 0.05 then the average difference is not significant The Sig.SD value of the Experiment and SD 26 Singgalang is 0.000, so <0.05 the average difference is ignificant.

Sig value. SD Negeri Experimental and SD Negeri 01 Kampung Jawa is 0.737 so > 0.05 the average difference is not significant

Sig value. 26 Singgalang and Kampung Jawa Elementary Schools is 0.000, so <0.05 the average difference is

The conclusion from the data above is that only the average of SD 26 Singgalang (Highlands) is different, SD The concentration in the data move is duit only in a verified on 20 or ingginariag (ingginards) is directing, of Kampung Jawa (Beachside) and SD Experiment (Lowlands) have the same average. Thus, the variables that have significant differences are SD 01 Kampung Jawa and SD 26 Singgalang

### ANOVA Test

Based on the data analysis above, it is known that the

Sig.  $0.000 \le 0.05$ , then the average of the three schools is "different" significantly. In conclusion, there is a significant difference between the average play activities of the three schools from the highlands, lowlands and seaside.

## Discussion

Children's play activities in the highlands are better than the coast and the lowlands because of the differences in environmental characteristics of each place. Playing activities in the highlands are in the very good category, on the coast in the lowlands. The play activities of children in the coastal plains and the lowlands are not significantly different. In the highlands, children are given freedom to play and do activities that are sufficient to be done outdoors, and for children in the lowlands, parents tend to protect their children's play activities because parents tend to prefer their children to learn and study religion. In that sense, children's play activities in the coastal plains and the lowlands are no different (they are in the same category). This is because the O2 plateau is very tenuous and causes the heart and lungs to work hard to take in O2 to meet the O2 needs for the muscle contraction process which requires a lot of O2 when playing.

Apart from that, the challenging topography and terrain become a place for children to play. Play activities such as climbing and descending terrain become part of their daily lives. Wide open fields, the highlands have more open spaces such as: grasslands and large fields, this provides opportunities for children for outdoor play activities. Children in the highlands spend longer playing activities, this is due to full support from parents and also the cooler climate, so children are more comfortable doing play activities.

For lowland and beachside children's play activities, there are no significant differences between lowland and beachside areas. In a sense, the playing activities are in the same category. The lowlands and seashores have O2 around children and they can easily inhale O2 for the needs of muscle contractions when playing. The lowlands and seashores have no challenges for the heart and lungs in meeting O2 needs. High altitudes with low O2 levels, if O2 levels are low, the heart and lungs will work harder to provide O2 for muscle burning. Lowlands and coastal areas, <500 meters above sea level, cause the heart and lungs to not work hard to provide O2. Of course, all of this has an impact on children's play activities, making them less active.

Apart from that, in the lowlands and on the coast, children are generally taken to school by car or motorbike. When playing, some lowland and beachside children prefer to play indoors, this is because the lowland and beachfront climates tend to be hot, this also results in children's playing activities being shorter because they cannot tolerate the heat. Thus, it can be concluded that children's play activities in the highlands are better than in the lowlands and on the coast. One of the goals of children in playing activities is as a means of recreation Gusril (2024)

## Conclusions

Geographical factors (coastal, lowland, and highland areas) have a big impact on children's' play activities because they shape their social, cognitive, and physical development. The current study's conclusions were based on the data analysis: (1) The level of play activities for children in the highland region falls into the very good category. The lowland region's level of children's play activities falls into the intermediate group. (3) Compared to lowland and coastal areas, children engage in more play activities in highland areas. (4) There is no discernible difference between children in coastal and lowland areas in terms of the level of play activities they engage in.

Finally, policies and practices aiming at encouraging varied and enriching play experiences across various locations can benefit from an understanding of these impacts. Given that the current study's focus is on determining how geographic locations affect children' play activities, more research should be done to examine these dynamics and how geography, socioeconomic position, and cultural traditions interact to influence kids' play. This thorough analysis emphasizes the necessity of context-specific play chances enhancement measures to guarantee that all children can reap the developmental benefits of play.

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