



## RESEARCH ARTICLE

# Exploring Mothers' Risk Tolerance In Children's Play: Investigating Parental Styles And Various Factors Predicting Children's Risk-Taking Behaviors

Simge YILMAZ UYSAL<sup>a</sup>  & Binaz BOZKUR<sup>a</sup> 

<sup>a</sup> Mersin University, Mersin, Türkiye.

## ARTICLE HISTORY

**Received:** 15.01.2024

**Accepted:** 24.06.2024

## KEYWORDS

Mothers' Allowance  
Risky Play, Parental  
Attitudes, Risky Play,  
Risk-Taking, Preschool  
Children

## ABSTRACT

This study investigated the factors related to mothers' tolerance of their children's involvement in risky play through a correlational research model. The participants in the research consisted of 324 mothers with preschool-aged children. The study employed the Risky Game Allowance Scale (Mothers' Form), the Parental Attitude Scale, and the Demographic Information Form as data collection instruments. Correlation and hierarchical regression analyses were used in the research. Results indicated that mothers with university degrees and those who were employed were more permissive regarding risky play. Additionally, older mothers were more inclined to endorse risky play. Overprotective parenting was associated with less approval of risky play, while democratic and permissive parenting showed higher approval for risky play. The findings highlight that mothers' age, educational level, employment status and parenting attitudes are significant predictors of tolerance for children's risky play. These results underscore the importance of a balanced parenting approach that encourages children's exploration and risk-taking within defined boundaries.

Risky play involves activities full of uncertainty and excitement, providing children with the advantages of taking beneficial risks (Little & Wyver, 2008; Stephenson, 2003). According to Sandseter (2007), risky play is defined as activities involving uncertainty and excitement, encouraging physical exploration of unfamiliar environments or scaling elevated locations. These feelings of uncertainty and excitement are characteristics that appeal to children's play preferences (Sutton-Smith, 1997).

More specifically, the reported contributions of taking risks for children encompass the development of attributes such as creativity, decision-making, problem-solving, concentration, risk management, coping with challenges, adaptability to new situations, self-esteem, self-confidence, and resilience skills (Lester, Jones, & Russell, 2011; Sandseter & Kennair, 2011). Aside from these advantages, it is well-documented that children derive enjoyment from engaging in risky activities (Sandseter, 2007; Sandseter et al., 2021).

Despite the well-known benefits of risky play, it has been observed that parents often have concerns about their children's participation in such activities. The primary concern among parents is the risk of injury (Jelleyman et al., 2019; Morrongiello et al., 2016; Sandseter et al., 2020), because they want to protect their

**CORRESPONDING AUTHOR** Binaz Bozkur, b.bozkur@hotmail.com, ORCID: 0000-0002-3821-7489, Mersin University, Mersin, Türkiye.

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children from harm (Carver, Timperio, & Crawford, 2008; Oliver et al., 2023; Veitch et al., 2006). Furthermore, Carver et al. (2008) reported that a significant proportion of parents restricted their children's risky play because of the possibility of their children breaking bones or sustaining serious injuries. Oliver et al. (2023) attributed parents' concerns regarding their children's engagement in risky play to the social pressure they feel to maintain their children's safety. Therefore, parents may be hesitant to endorse their children's involvement in risky play and may even restrict their participation in such activities (Arlinkasari et al., 2023; Little, 2010, 2015).

In the context of Turkey, parental concerns regarding children's participation in risky play are a frequently encountered issue. Parents frequently prioritize their children's safety, significantly limiting their involvement in such activities (Arlinkasari et al., 2023; Sicim-Sevim & Bapoğlu-Dümenci, 2020). Therefore, it is considered highly important to investigate the factors that influence parents' concerns about their children's participation in risky play within the context of Turkish culture. Additionally, it is important to consider various factors influencing parents' decisions regarding risky play. In addition to safety concerns, demographic factors including age, gender, employment status, and educational statuses (Akdemir et al., 2023); and parents' perceptions of risk (McFarland & Laird, 2018; Ryan et al., 2024) played a significant role in parents' decisions to limit their children's risk-taking during play.

Several studies have highlighted the influence of mothers' age on their attitudes towards their children's engagement in risky play. Research indicates that older mothers tend to be more permissive regarding their children's risk-taking behaviors (Averett et al., 2011), which may be attributed to the accumulation of relevant experiences as they age (Harper, 2017; Nesbit et al., 2021; Oliver et al., 2023; Woolley et al., 2009). If a mother's personal experiences include a high tolerance for risk, her acceptance of her child's risk-taking is also found to be higher (Yılmaz-Uysal & Çiğ, 2022). Furthermore, numerous studies suggest that mothers of younger children are more likely to limit their children's engagement in risky play compared to mothers of older children (Oliver et al., 2022; Yılmaz-Uysal & Çiğ, 2022).

Considering demographic variables in terms of parents' gender, it was found that mothers are generally more cautious than fathers about their children's engagement in risky play (Brussoni et al., 2018; Schoeppe et al., 2015). Moreover, parental employment status has been found to have a positive impact on parents' attitudes towards children's risky play. Finally, it has been noted that parents with higher levels of education are more inclined to support their children's participation in risky play than those with lower levels of educational backgrounds (Akdemir et al., 2023).

Given the critical role of parental tolerance in shaping their children's engagement in risky play, it is imperative to explore the predictors of the relationship between parenting styles and allowing risky play. Several researchers (i.e., Akdemir et al., 2023; Cevher-Kalburan & Ivrendi, 2016; Larson et al., 2011) have highlighted that children's play behaviors can be influenced by parenting styles. An example of this is that over-protective parental attitudes can have adverse consequences, constraining children's engagement in risky play.

To comprehensively explore the impact of the aforementioned factors, the present study pursues three main objectives: 1) to compare mothers' levels of allowing risky play with preschool children in terms of various variables (educational status, employment status, place of residence and number of children); 2) to examine the relationship between mothers' age and parental attitudes and the factors affecting their allowing risky play; 3) to investigate the predictive role of various variables (mothers' age, mothers' educational status, employment status and parental attitudes) in determining mothers' inclination to encourage their children's risk-taking during play.

The outcomes of this research may contribute to a deeper comprehension of the factors that shape children's engagement in risky play and the potential implications for their developmental trajectory. Furthermore, an understanding of the factors that influence parents' attitudes toward risky play could facilitate the development of interventions and strategies that encourage children's play opportunities while addressing and alleviating parents' concerns.

### Methodology

In the present study, a correlational research model was employed to examine the factors associated with mothers' tolerance for their children's involvement in risky play. A correlational study is one in which cause-and-effect relationships cannot be established due to the nature of the study, as variables cannot be changed or

controlled (Erkuş, 2011). This model was selected to identify and analyze the relationships between mothers' demographic characteristics (age, education level, and employment status.) and their parenting attitudes (overprotective, democratic, and permissive) in relation to their tolerance for risky play.

### Participants

In this study, a convenience sampling method, which is a type of purposive sampling, was utilized. To reach the study group, we contacted mothers of students enrolled in preschool institutions in a province located in the Mediterranean Region through parent communication groups on social media. A total of 324 mothers with children aged between 4 and 6 years participated in the study. To meet the predefined inclusion criteria, participants had to be mothers and have basic literacy skills. Those who did not meet these criteria were excluded from the study. The average age of the participating mothers was  $34.49 \pm 5.07$  years. Of the participants, 74.4% lived in urban areas, while 25.6% resided in rural regions. Regarding the number of children, 29.3% had one child, whereas 70.7% had two or more children. In terms of employment status, 47.5% were employed, while 52.5% were not working. An examination of the participants' educational background showed that 64.2% had a university degree, while 35.8% had a high school diploma or less.

To determine the minimum sample size required for hierarchical regression analysis in this study, calculations were made using G\*Power 3.1 according to the following parameters: Medium effect size 0.15,  $\alpha = 0.05$ , power = 0.95, two tested steps and 7 predictors. The minimum calculated sample size was determined as 153 participants. However, 324 mothers were reached in our study, which is more than twice the specified minimum sample size. This large sample size increases the reliability and generalizability of the results, enabling statistical analyses to produce more sensitive and reliable findings. Therefore, the sample size of our study is sufficient and appropriate in terms of the validity and reliability of the research findings.

### Measures

**Risky Game Allowance Scale (Mothers' Form).** The Risky Game Allowance Scale (Mothers' Form) evaluates mothers' permission for their 2-6-year-old children attending preschool education to engage in risky play. This scale, developed by Ünüvar and Kanyılmaz in 2017, consists of 21 items and four sub-dimensions. These sub-dimensions are Playing at Very Risky Heights, Playing with Dangerous Equipment, Playing at Low-Risk Heights and Playing Close to Dangerous Natural Elements. It also presents an overall score, rendering it applicable for utilization in this study. In the original study, the internal consistency of the scale was evaluated using Cronbach's alpha ( $\alpha$ ), resulting in a coefficient of .88, which is indicative of an acceptable level of reliability (Ünüvar & Kanyılmaz, 2017). In this study, the  $\alpha$  coefficient for the total score was found to be .93, indicating a high level of internal consistency.

**The Parental Attitude Scale.** The Parental Attitude Scale was utilized in this study to assess the parental attitudes of mothers with children aged 2-6 years. The scale, developed in 2008 by Karabulut-Demir and Şendil, comprises four sub-dimensions and a total of 46 items. The sub-dimensions are categorized as authoritarian attitude, democratic attitude, permissive attitude and over-protective attitude. In the original study, the internal consistency coefficient of the scale was obtained by calculating  $\alpha$ , which was .76 for authoritarian, .83 for democratic, .74 for permissive and .75 for over-protective attitude (Karabulut-Demir & Şendil, 2008). In the current study,  $\alpha$  coefficients were calculated as .78 for authoritarian, .82 for democratic, .78 for over-protective and .77 for permissive attitude. These values indicate that the scale has an acceptable level of internal consistency.

**Demographic Information Form.** To collect demographic data from participants, the authors created a Demographic Information Form for this study. The form covers various aspects, such as age, educational and employment status, place of residence, and number of children.

### Data Collection

Data collection was carried out online using Google Forms. The data collection procedure was voluntary. Participants were required to provide their informed consent during data collection through a Google form. Participants who did not consent were not allowed to proceed with the data collection process. Additionally, a mechanism was employed to prevent individuals from submitting data multiple times from the same device,

which enhanced data security.

### Data Analysis

The data in the study were analyzed using SPSS 25.00 software package. Prior to the analyses, a test was performed to assess normality assumption. The kurtosis and skewness coefficients for all measurements were found to be within the range of  $\pm 2$ , as recommended by George and Mallery (2003). To investigate the relationships between the variables under examination, the Pearson Product Moment Correlation Coefficient was employed. Furthermore, hierarchical multiple regression analysis was conducted to determine the extent to which the variables predicted mothers' tolerance for risk-taking.

Prior to conducting the regression analysis, the assumptions of the model were subjected to a comprehensive examination. To satisfy the multicollinearity assumption, the correlation coefficient between variables must be less than 0.80. To ensure independence of errors, the Durbin-Watson value should approximate 2 (Field, 2009). Furthermore, the Variance Inflation Factor (VIF) value must be below 10, and the tolerance value should exceed 0.10 (Hair et al., 2014). The results of the analyses revealed linear data, absence of multicollinearity issues (VIF: 1.65-1.09; Tolerance: .91-.60), and independent errors (Durbin-Watson: 2.09), indicating that no issues with multicollinearity or residuals were found. Thus, all assumptions were met accordingly. The predetermined order of entry of independent variables sets into the regression model aligned with the research questions. In order to ascertain the requisite sample size for the multiple regression analysis, an a priori power analysis was conducted with respect to the total  $R^2$  value. This analysis was based on the assumption of seven predictor variables, a power level of .95, and an alpha level of .05. The G\*Power software (Faul et al., 2007) was used for this analysis, which determined that a sample size of 153 participants was necessary to detect a medium effect size ( $f^2 = .15$ ; Cohen, 1988).

## Results

### Preliminary analysis

To assess potential differences in mothers' allowance towards risky play based on the categorical variables examined in this study, independent samples t-tests were performed. The outcomes of these analyses are reported in Table 1.

**Table 1.** Results of t-tests for Mothers' Allowance of Risky Play Across Categorical Variables

Categorical variables	Categories	N	Mean	SD	Df	t	p
<b>Education level</b>	University degree	208	53.23	16.07	322	8.42	.00
	High school or lower	116	39.72	12.43			
<b>Employment status</b>	Employed	154	50.78	15.28	322	2.55	.01
	Unemployed	170	46.22	16.74			
<b>Place of residence</b>	Urban	241	49.40	16.12	322	1.92	.06
	Rural	83	45.45	16.17			
<b>Number of children</b>	1	94	50.50	16.94	322	1.49	.14
	2 and above	229	47.53	15.88			

\*  $p < 0.05$

Table 1 displays the t-test results, depicting the mean scores of participants' allowance towards risky play, as influenced by their educational level, employment status, place of residence, and number of children variables. The analysis revealed no statistically significant differences in participants' allowance of risky play based on place of residence and number of children variables. However, a significant difference was observed based on participants' educational level, favoring university graduates. Similarly, a significant difference was found based on employment status, favoring working mothers. Table 2 provides descriptive statistics, and Pearson correlations, for the continuous variables examined in the study.

**Table 2.** Descriptive Statistics and Correlations Among the Variables (N=324)

Variables	Mean	SS	1	2	3	4	5	6
Age	34.49	5.07	-					
Democratic	75.21	6.26	-.12*	-				
Authoritarian	19.15	4.69	.05	-.38**	-			
Over-protective	31.01	5.76	-.25**	-.04	.10	-		
Permissive	19.96	4.57	.08	-.15**	.20**	.02	-	
Allowing risky play	48.38	16.20	.21**	.16**	-.02	-.48**	.19**	-

\* Correlation level of significance:  $p < .05$ , \*\*  $p < .01$

Table 2 reveals noteworthy findings regarding the relationships between allowing risky play and various variables. Specifically, a positive and statistically significant association of low magnitude was observed between allowing risky play and the age variable. This indicates that as participants' age increases, their inclination towards allowing risky play also increases. Furthermore, a positive and statistically significant relationship of low magnitude was observed between the level of allowing risky play and both democratic and permissive parental attitudes. This implies that as participants' democratic and permissive parental attitudes increase, their propensity to allow risky play also increases. Conversely, participants' allowing risky play exhibited a moderate and negative statistically significant relationship with over-protective parental attitudes. This signifies that as over-protective parental attitudes intensify, the inclination towards allowing risky play diminishes. Finally, the results indicated that there was no statistically significant correlation between the allowing risky play and the authoritarian parental attitude.

**Hierarchical regression analysis (HRA)**

The HRA was employed to predict participants' allowance of risky play. The variables were entered into the regression model in two sequential blocks. To determine the demographic control variables for analysis, the results of t-tests and correlation analyses were carefully considered. Firstly, the selected demographic variables as control variables were included in the model. Subsequently, the variables associated with parental attitudes were entered as the second step (refer to Table 3). The outcomes of the HRA are presented in Table 3.

**Table 3.** The HRA with Risk as a Dependent Variable

Variable	Step 1				Step 2				
	B	SE	B	t	B	SE	$\beta$	t	VIF
Employment	-4.26	1.97	-.13	-2.16*	-4.75	1.77	-.15	-2.68	1.45
Education level	14.80	2.05	.44	7.21*	8.60	1.96	.26	4.39	1.45
Age	.40	.17	.13	2.38*	.26	.16	.08	1.69	1.10
Democratic					.47	.13	.18	3.69	1.21
Authoritarian					.18	.17	.05	1.03	1.21
Over-protective					-1.11	.14	-.40	-7.83	1.25
Permissive					.659	.17	.19	3.93	1.09
F		23.92*				24.58*			
R <sup>2</sup>		.18				.35			

Note: \* $p < .05$ ., 1= Employed, 0= unemployed, 1= university degree, 0= high school or lower

The findings pertaining to the HRA are presented in Table 3. The predictors of employment status, education level, age, and parental attitudes accounted for 35.3% of the variance, yielding a significant model ( $p < .001$ ).

During the initial step, demographic variables alone accounted for 26% of the risk variance ( $R = .428$ ;  $R^2 = .183$ ). Subsequently, the inclusion of democratic, authoritarian, over-protective, and permissive parental attitude variables in the second step resulted in an increased variance explanation of 33.3% ( $R = .594$ ;  $R^2 = .368$ ,  $p < .001$ ). More precisely, the parental attitude variables added in the second step explained an additional 17% of the variance. Upon closer examination of the values presented in the table, it is evident that employment status, education level, and age significantly predict the variables of allowing risky play. Regarding parental attitudes, over-protective, democratic, and permissive parental attitudes emerged as significant predictors of allowing risky play, whereas authoritarian parental attitude did not yield significant predictions of allowing risky play.

### Discussion

The current study examined the factors influencing mothers' decisions to permit risky play among their preschool children. Findings indicated that mothers who were employed and/or possessed a university degree were more inclined to permit risky play among their preschool-aged children. Additionally, the study observed that older mothers exhibited a greater tendency to permit such activities. Tolerant and democratic parental attitudes were positively associated with the willingness to allow risky play, whereas overprotective attitudes were negatively associated. Notably, mothers' age, educational level, and employment status emerged as significant determinants of their willingness to allow risky play. However, authoritarian parental attitudes did not significantly impact mothers' decisions regarding risky play.

An important finding of this study reveals that working mothers are more tolerant of their children's engagement in risky games. The findings of Akdemir and colleagues (2023) also support this perspective. Working mothers' access to childcare and education services can facilitate the creation of environments suitable for risky play (Kangas & Rostgaard, 2007; Lewis, 2003). These services provide safe and supervised spaces where children can engage in risky activities (Boyd et al., 2010). Moreover, working mothers can model and encourage risk-taking based on their own courageous experiences (Aughinbaugh & Gittleman, 2004; Little, 2015; Twigger-Ross & Breakwell, 1999). Such experiences can help working mothers encourage risk-taking in their children and better understand the benefits of risky play on children's personal development and growth. However, there are also studies in the literature suggesting that working mothers may be less inclined to allow their children to engage in risky play due to time constraints and housework (Oliver et al., 2022). These opposing views suggest that the relationship between working mothers' attitudes towards risky play may be complex and context-dependent.

The current research suggests that mothers with a university degree exhibit a higher inclination to support and permit risky play, consistent with prior literature (e.g., Cevher- Kalburan & Ivrendi, 2016). Several factors may contribute to the positive association between mothers' higher educational attainment and permissiveness towards risky play. Specifically, some studies (e.g., Akdemir et al., 2023; Karaca & Aral, 2020) propose that higher levels of education correlate with a more progressive parenting approach that underscores the significance of allowing children to engage in activities involving risk-taking. Risk-taking is acknowledged as a pivotal factor in children's development of autonomy and independence (Murray & Hrusa Williams, 2020). Consequently, mothers with higher educational levels are reported to be more inclined to encourage risk-taking in their children compared to parents with lower educational backgrounds (Akdemir et al., 2023; Cevher-Kalburan & Ivrendi, 2016).

The study findings reveal a positive correlation between mothers' age and their endorsement of risky play, indicating that older mothers are more likely to permit such activities compared to younger mothers. This propensity among older mothers may stem from their accumulated parenting experience, which fosters a sense of trust and a tolerant attitude (Morrongiello & Major, 2002). Additionally, the environments in which older parents were raised were often less risk-averse, potentially contributing to their encouragement of their children's engagement in risky play (Gill, 2007). Conversely, younger and less experienced parents may adopt a more cautious approach towards risky play, influenced in part by the prevailing culture of risk aversion in recent years (Yılmaz, 2020). Understanding the reasons for different attitudes towards risky play requires considering parents' age and parenting experience.

The finding that mothers with democratic and permissive parental attitudes tended to permit more risky play aligns with previous research emphasizing the positive influence of these parenting styles on children's

autonomy and development. Yanuarsari et al. (2021) discovered that children raised under democratic parenting tend to cultivate independence, responsibility, courage to take risks, and self-confidence. Furthermore, such children demonstrate improved academic performance and the development of their inherent abilities. Similarly, the present study's findings indicated that permissive parenting increased permission for risky play. However, according to Yanuarsari et al. (2021), children raised with permissive parenting tend to exhibit lower levels of independence, slower development, decreased motivation, and a lack of self-control and confidence. This contradictory finding may suggest that societal considerations significantly influence parents' decisions to grant freedom to their children (Brussoni et al., 2012; Little, 2015). Essentially, societal pressures may compel parents to adhere to socially accepted norms rather than prioritize their children's best interests (Jelleyman et al., 2019). In the study by Yanuarsari et al. (2021), mothers who exhibit permissive parenting attitudes may protect their children from risky situations and prevent them from meeting their real needs in order to be perceived as "good mothers". However, in this study, mothers may have a better understanding of the benefits of risky play for children and may encourage their children to take risks during play.

The opposite relationship between overprotective parental attitudes and allowing risky games is consistent with similar research results in the literature (Cevher-Kalburan & Ivrendi, 2016; Ungar, 2009). Such parents' high levels of concern about child safety and well-being may cause them to take a more cautious approach to risky games that they perceive as potentially dangerous and harmful (Morrongiello et al., 2009; Şimşek, 2023; Tandy, 1999; Valentine & McKendrick, 1997; Yokum, 2018). These concerns of overprotective parents may constitute an obstacle to their children's development and learning as a result of risk-taking (Eager & Little, 2011). Preventing risk-taking at a young age may negatively affect the development of children's risk management skills, which may make them more vulnerable to risky situations (Brussoni, 2020; Brussoni & Olsen, 2013).

### **Implications and Future Directions**

The current study revealed that mothers with higher educational levels and working mothers were more likely to allow their children to engage in risky play compared to mothers with lower educational levels and unemployed mothers. The findings also indicated that as the age of the mothers increased, their tendency to permit risky play also increased. Additionally, democratic and tolerant parental attitudes were positively associated with the tendency to allow risky play, while overprotective parental attitudes decreased this tendency.

The research findings have significant implications for the fields of child development, child psychology, counseling, and early childhood education. The variation in mothers' attitudes towards risky play based on their educational level and employment status necessitates the design of parent education programs that consider these differences. Programs targeting highly educated and employed mothers should emphasize the benefits of risky play in fostering children's independence and problem-solving skills. Conversely, support programs should be primarily designed for young, unemployed mothers to build their confidence in permitting risky play.

Given that parents' age also influences their attitudes towards risky play, child development specialists and counselors should provide individualized guidance and support services that take parental age into account. Promoting democratic and tolerant parental attitudes can help children develop independence, responsibility, and problem-solving skills. In this context, counselors and early childhood educators should collaborate with parents to understand their attitudes towards risk-taking and independence and integrate these insights into educational programs. This approach can create a consistent and safe environment that supports children's development.

### **Conclusion and Limitations**

In conclusion, the research illuminates how parental attitudes, education, and age influence the extent to which risky play is allowed in children. It underscores the importance of adopting a balanced parenting approach that encourages children's exploration and risk-taking within controlled parameters. Early childhood educators can utilize this information to collaborate effectively with parents and create environments that facilitate healthy

child development through appropriate risky play experiences.

Despite its important contributions, this research has limitations. Potential social acceptance errors may affect the data, as it was collected through self-report scales. To address this, future studies should use a triangulation approach, incorporating data from various sources to enhance validity and reliability. Furthermore, the cross-sectional design of the study precludes the establishment of cause-and-effect relationships. Future research should employ experimental and longitudinal methods to explore these relationships more comprehensively.

**Ethical approval:** The study was approved by the Social and Human Sciences Scientific Research and Publication Ethics Committee of Mersin University (04.07.2023, 140). The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

**Declaration of no conflicts of interest:** The authors declare no competing interests relevant to the content of this article.

**Data availability:** Data generated and/or analyzed during this study are available upon reasonable request from corresponding author.

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