



Future Academy®'s Multidisciplinary Conference

Rewards and punishments in the education of preschool children

Jitka Jakešová^{a*}, & Silvie Slezáková^b

^aResearch Centre, Faculty of Humanities, Tomas Bata University in Zlín, nám. T. G. Masaryka 1279, 760 01 Zlín, Czech Republic

^bFaculty of Humanities, Tomas Bata University in Zlín, nám. T. G. Masaryka 1279, 760 01 Zlín, Czech Republic

Abstract

The authors are focused on measuring the preferences of parents to traditional or alternative forms of rewards and punishments in the education of preschool children. For this purpose the questionnaire for parents was created. Research has shown that parents are aware of the alternative forms of rewards and punishments and try to implement them in their education. Differences in the preference for the traditional and alternative concept of education by gender of the parents, age and the number of children in the family were not found. The only significant influence was found in the parents' level of education.

© 2016 Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of Future Academy® Cognitive Trading

Keywords: Rewards; punishments; preschool children; parents; questionnaire

1. Introduction

As is evident from the historical periods, opinions on the value of children have gradually changed although a manipulative attitude towards children persisted for a very long time and the social value of children increased extremely slowly. The interest of society, particularly from the Catholic Church for children in difficult situations (e.g. illegitimate, abandoned, disabled) appears with the advent of Christianity. With the arrival of the Enlightenment, represented by Voltaire, Rousseau, Pestalozzi and others, the situation of children changed considerably. The needs of children have been recognized and looked after since this period of time.

However, the increasing value of children and the deeper exploration of their life, learning and developmental needs is a feature of a later socialization stage. This period turned the intense attention of many experts towards the

* Corresponding author. Tel.: +420-576-038-007.

E-mail address: jjakesova@fhs.utb.cz

process of integrating the child into society, while clearly emphasizing the irreplaceable role of the family. The phase of support and help is characterized by encouraging and helping the child overcome immaturity and mastering a variety of burdens. Currently children are becoming an adult partner, especially to parents and those who are involved in their early education. As Kohn (1999) says, the basic strategy for raising children can be summarized in six words: "Do this and you'll get that". We dangle goodies (from candy bars to sales commissions) in front of people in much the same way that we train the family pet. Drawing from hundreds of studies, Kohn (1999) demonstrates that people actually do inferior work when they are enticed with money, grades, or other incentives. Programs that use rewards to change people's behavior are similarly ineffective over the long run. Promising goodies to children for good behavior can never produce anything more than temporary obedience. In fact, the more we use artificial inducements to motivate people, the more they lose interest in what we're bribing them to do. Rewards turn play into work, and work into drudgery. Parents who care about helping children to learn and behave, meanwhile, should be doing everything possible to help them forget that external stimuli exist. Basically, the more educational care relies on incentives, the worse things get.

Rewards and punishments seem at first glance like two completely different concepts, but these are two sides of the same coin. Their similarity is that both are only an external impulse (incentive), which focuses on the external behavior of the child. Both tend to have an immediate effect which most people see as the primary result and never think of their long-term negative impact on personality development. What should be preferred? Rewards or punishments? The research results can be summarized in the clear findings (Čáp & Mareš, 2001): education based on rewards has better results than education based on punishments. The authors further stated that rewards encourage learning, including social learning, which has a large importance in education. Unlike the effect of punishments that one can hardly predict. The same punishment leads one child to correct his behavior, the other to obedience but only outwardly, the third child reacts negatively and more likely continues with the undesirable behavior and the fourth can fall into depression. Unfortunately, the punishment very often leads to the opposite of what should have been achieved.

The rewards are perceived as such actions combined with the behavior and conduct of a child that expresses a positive evaluation and brings the child joy and satisfaction to some of his needs. Conversely, the punishments are such actions which express a negative evaluation and bring the child resentment, frustration or restriction of certain needs. An alternative form of rewards and punishments tends to show the respect and appreciation of the children. Therefore, parents and children are seen as equal partners responsible for their actions. Parents' attention is focused on the ability of the child, his achieved results and the development of confidence and self-esteem. It is a process of encouraging the child that is in contrast to the traditional understanding of rewards and punishments.

The theme of rewards and punishments in the education of children is part of the various disciplines related to child development. Its relevance is also known under diverse specific orientation of the research. Such as identification of associations between children's behaviour and their performance on a task with a steadily increasing ratio of punished to rewarded responses in a group of clinic-referred children with an anxiety disorder (O'Brien & Frick, 1996). Another example is the process of validating the Sensitivity to Punishment and Sensitivity to Reward Questionnaire for Children (SPSR-C) performed by Luman, van Meel, Oosterlaan and Geurts (2012). The results of the comparisons between children 6-13 years old with attention deficit hyperactivity disorder (ADHD) and without comorbid oppositional defiant disorder (ODD) or autism spectrum disorder (ASD) showed that children with ADHD have a heightened sensitivity to reward compared to typical controls, while a heightened sensitivity to punishment was displayed particularly by children with ADHD+ASD. The parent-child interaction therapy and triple p-positive parenting program (Thomas & Zimmer-Gembeck, 2007) is suggested as a way to strengthen the relationship between the child and the parent.

Rewards and punishments as regulators of children's behavior have been discussed in education in all societies throughout all periods of time. They belong among the most common means of education having many species, functions and risks associated with their use. Therefore, parents should choose appropriate rewards or punishments for the child's personality and age, and ultimately they should apply them consistently. It is therefore very important for the parents to know how to properly use these educational resources. In the presented research we were investigating if the use of traditional or alternative rewards and punishments vary according to parents' gender, age, education and the number of children in the family and what form (traditional or alternative) is preferred among

parents in education of preschool children. The focus on preschool education was chosen intentionally because we believe that this period is the most sensitive to the formation of a child's personality.

2. Research methodology

The research is designed as descriptive and relational. The descriptive part describes the studied reality of the research using descriptive statistics. The relational part reveals whether there are links between the studied phenomena and how close the relationship is. The main objectives of the research findings include the achieved level of alternative and traditional rewards and punishments of parents in preschool education. Overall, 19 hypotheses were tested investigating the relationship and differences according to the observed variables; such as gender, parents' age, the level of education and the number of children in the family.

Data description is shown through frequency tables and graphical methods and by the characteristics of the position and extent of variability. The test for normality using the Shapiro-Wilk method did not prove normal distribution of the data (Alternative rewards: $s = .950$, $df = 127$, $p = .000$; Traditional rewards: $s = .972$, $df = 127$, $p = .009$; Alternative punishments: $s = .925$, $df = 127$, $p = .000$; Traditional punishments: $s = .971$, $df = 127$, $p = .007$). Therefore nonparametric statistics were used. Differences between the variables were examined by the Kruskal-Wallis ANOVA and a Mann-Whitney U test and the level of correlation was explored using the Spearman correlation coefficient. Possible incorrect results due to multiple categorical variables were corrected by the Bonferroni method. The calculations were performed in the IBM SPSS Statistics v. 22 program.

2.1. Measurement

Since no reliable and valid instrument existed for measuring the preference of traditional or alternative rewards and punishments of parents with preschool children, a new one was constructed by authors. Due to the research questions and objectives of the research a questionnaire was constructed and addressed to parents. The questionnaire consists of 18 items, of which 4 items determine socio-demographic information about the respondents (i.e. gender, age, education and the number of children per family). The ensuing 12 items proclaimed the degree of use of alternative rewards (i.e. "I want to show my respect and appreciation to my child. I want the child to know that we are equal partners and thus I highly participate in building his self-esteem"); traditional rewards (i.e. "Compliments teaches children to do things well and are mostly needed in order to ingratiate the authority"); alternative punishments (i.e. "Partner and equal relationship without punishment between parents and children builds awareness in the child how to behave and act") and traditional punishments (i.e. "Punishments represent a necessary part of a good education") among parents of preschool children. The questionnaire uses a 5-point Likert scale ranging from "strongly disagree" to "strongly agree" and the central point being "uncertain". Achieving higher values means stronger agreement with the statement.

The remaining two items detect the most preferred form of rewards and punishments parents selected from the referred list of rewards (candy bars, compliment, appreciation and shared experience) and punishments (shared problem solving and rectification, physical punishment, keeping favorite toys and threats).

The Cronbach's alpha of 12 items together comprising alternative and traditional forms of rewards and punishments was $\alpha = .50$ (see Table 1). The Cronbach's alpha of single dimensions reached quite high values for only three items within a given range. The reliability ranged from .34, the lowest for alternative rewards, to the highest value of $\alpha = .68$ for traditional punishments. Overall, the results show that the instrument is reliable and suitable for its use.

Table 1. Reliability of the questionnaire.

Dimensions	Number of items	Cronbach's alpha
Alternative rewards	3	.34
Traditional rewards	3	.61
Alternative punishments	3	.60
Traditional punishments	3	.68

In total 12 .50

2.2. Sample

The basic research sample consisted of parents (N = 400) of preschool children from the small-sized town of Dubňany with 6,000 inhabitants situated in the South Moravian Region of the Czech Republic. The sample represents 127 parents (the return percentage of the questionnaire is 32%). Respondents were selected on the basis of their voluntary choice – all parents from the basic sample had the opportunity to participate in the survey. The sample location was based on the need to clarify the type of further work with children in preschool education in this area based on the parenting experiences, and preferences.

In terms of gender, the research sample consists of 43 men (34%) and 84 women (66%). The average age of respondents was 35.13 years and ranged from 24 to 55 years (SD = 5.463). Parents most often had completed High School (45%) and Secondary vocational school (32%). 61% of the parents had 2 children, 27% had one child and 1% of the parents had the largest family consisting of 4 children. The representation of respondents according to age, education and the number of children in the family is shown in Table 2.

Table 2. Composition of the research sample by age, education and number of children in the family.

	Age of parents				Education of parents					Number of children			
	up to 30 years	31 - 35 years	36 - 40 years	over 40 years	Basic school	Secondary vocational school	High School	Higher vocational school	University	1 child	2 children	3 children	4 children
n	23	53	31	20	3	40	57	18	9	34	77	15	1
%	18	42	24	16	2	32	45	14	7	27	61	12	1

3. Results

The descriptive statistics show (see Fig. 1) that the highest levels were achieved by alternative approaches, specifically the highest score was achieved by alternative punishments ($\bar{x} = 4.04$, $SD = .74$), followed by alternative rewards ($\bar{x} = 3.85$, $SD = .66$). Using traditional rewards and punishments reached a lower comparable level than alternative forms. This could mean that parents most likely identify themselves with the alternative form of rewards and punishments in the education of preschool children.

Since the average rates are very close, we were interested in whether the differences are statistically significant (the achieved difference between the highest and the lowest value is 1.33). The results of the Friedman test suggest that there are statistically significant differences in the achieved average rates of rewards and punishments $\chi^2(3, n = 127) = 108.183$, $p < .05$). It can be said that the parents perceive traditional and alternative forms of rewards and punishments differently.

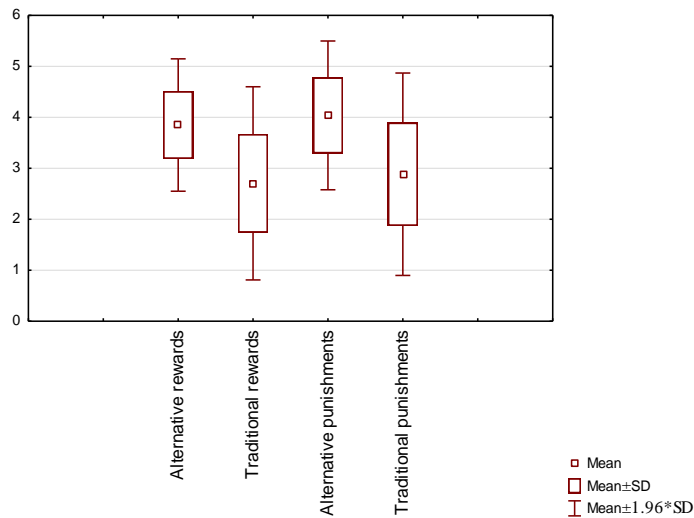


Fig. 1. The average scores on alternative and traditional rewards and punishments.

On the basis of the correlations test, a significant and very strong positive relationship was found between the use of traditional rewards and traditional punishments ($r_s = .598, N = 127, p < .01$) and between alternative rewards and alternative punishments ($r_s = .583, N = 127, p < .01$). It can be said that parents who are characterized by the use of alternative rewards also have a positive attitudes towards the use of alternative forms of punishments in the education of preschool children and vice versa. As was expected the correlation coefficient between the alternative and traditional variables (rewards and punishments) are negative and very low (see Table 3).

Table 3. Correlations of forms of rewards and punishments and age of parents.

	Age of the parents	Alternative rewards	Traditional rewards	Alternative punishments	Traditional punishments
Age of the parents	1.000	-.114	-.059	-.149	-.010
Alternative rewards		1.000	-.362**	.583**	-.157
Traditional rewards			1.000	-.299**	.598**
Alternative punishments				1.000	-.298**
Traditional punishments					1.000

** . Correlation is significant at the 0.01 level (2-tailed).

To get an idea of the percentage of variance involving two variables (traditional rewards vs. traditional punishments and alternative rewards vs. alternative punishments), the calculation of the coefficient of determination r^2 can be used (Pallant, 2010). In our case ($r_s = .598$ and $.583$) the variables reached the 36% and 34% shared variance. In other words, the use of traditional rewards helps explain (predict) 36% of the use (variance) of traditional punishments. By detecting a correlation between the age of parents and preference of alternative or traditional rewards and punishments a low negative relationship was found ($r_s = -.114$ and $r_s = -.149$) between the use of alternative rewards and punishments in relation to the age of the parents (see Table 3). It can be said that parents with increasing age tend to be more traditional oriented in their form of rewards and punishments in education and vice versa.

We wondered whether there are differences in the preference for the traditional and alternative concept of education according to the gender of parents. We assumed that men are more traditionally oriented than women. This hypothesis was not confirmed (see Table 4).

Table 4. The descriptive statistics by gender.

Gender	Man			Woman			Difference M-W	Together		
	N	\bar{x}	SD	N	\bar{x}	SD	Sign.	N	\bar{x}	SD
Alternative rewards	43	3.822	.700	84	3.865	.647	.897	127	3.850	.662
Traditional rewards	43	2.581	.968	84	2.770	.965	.268	127	2.706	.966
Alternative punishments	43	4.023	.801	84	4.048	.719	.992	127	4.039	.745
Traditional punishments	43	2.852	.963	84	2.901	1.042	.844	127	2.885	1.013

Preferred forms of rewards and punishments are not affected by age (confirmed by a low correlation with age), nor the number of children in the family. The only significant influence was found in parents' level of education and the use of traditional rewards $\chi^2(4, n = 127) = 19.13, p = .001$; traditional punishments $\chi^2(4, n = 127) = 13.13, p = .011$ and alternative punishments $\chi^2(4, n = 127) = 13.64, p = .009$. It means that parents reaching basic education prefer the traditional rewards and punishments more widely than parents with higher education. Alternative punishments are preferred to a greater extent by parents reaching a higher professional education level than parents with the basic education.

From the list of four options that are often used by parents as the rewards compliments (52%) were the most often selected, followed by shared experience (19%), candy bars and appreciation (13%). On the other hand, the most commonly used form of punishments was shared problem solving and rectification (35%), followed by keeping favorite toys (26%), threats (23%), and physical punishment (7%). The results point out the effort of parents to meet the children's' needs and accept the child as an equal partner. These findings have only indicative substantiality since the presented lists of possible forms of rewards and punishments isn't an exhaustive selection.

4. Summary and discussion

There is no clear guidance how, when and why to use rewards and punishments. Every child is different and responds differently to various educational methods. Most often, the reward is understood as something that comes when the child does the right thing. It is seen as a form of positive incentive effects. Conversely punishments predominate in authoritative education systems. The most common consequences of such education is deep frustration, fear and humiliation of children. A big mistake is punishing the child at the time when the parents are guided by anger and fury. At that moment, a much harder punishment is chosen than would be used in the given situation, if they were calm and composed.

The presented research is situated in the small-sized town of Dubňany with 6.000 inhabitants, located in the South Moravian Region of the Czech Republic. The preschool education of children takes place primarily in the family, that's why the research is aimed at parents of preschool children. Respondents ($n = 127$) were selected on the basis of their voluntary choice – all parents from the basic sample had the opportunity to participate in the research.

The research is designed as descriptive and relational. The descriptive part describes the studied reality of research using descriptive statistics. The relational part reveals whether there are links between the studied phenomena and how close the relationship is. The main objectives of the research findings include the achieved level of alternative and traditional rewards and punishments of parents with preschool age children. Overall, 19 hypotheses were tested investigating the relationship and differences according to the observed variables: gender, parents' age, the level of education and the number of children in the family.

A new instrument for measuring the preference of traditional or alternative rewards and punishments of parents with preschool children was created to obtain the data. The questionnaire consists of 18 items, of which 4 items determine socio-demographic information about the respondents (i.e. gender, age, education and number of children per family). The ensuing 12 items proclaimed the degree of use of alternative and traditional rewards and alternative punishments and traditional punishments among parents of preschool children. The 5-point Likert scale was used. The remaining two items detect the most often used form of rewards and punishments from those selected from the referred list of rewards and punishments. Overall, the results show that the instrument is reliable and suitable for its use.

The highest levels were achieved by alternative approaches, specifically the highest score was achieved by alternative punishments, followed by alternative rewards. This result could mean that parents most likely identify themselves with the alternative form of rewards and punishments in the education of preschool children than with traditional kinds. A very strong positive relationship was found between the use of traditional rewards and traditional punishments and between alternative rewards and alternative punishments. Parents who are characterized by use of alternative rewards also have positive attitudes towards the use of alternative forms of punishments in the education of preschool children and vice versa. As was expected the correlation coefficient between the alternative and traditional variables (rewards and punishments) are negative and low. Differences in the preference for the traditional and alternative concept of education by gender of parents, age and the number of children in the family were not found. It means that the way parents use the rewards or punishments isn't influenced by those variables. The only significant influence was found in parents' level of education and the use of traditional rewards, traditional and alternative punishments. It was shown that parents reaching lower education prefer traditional rewards and punishments more widely than parents with higher education. In other words alternative punishments are preferred to a greater extent by parents reaching a higher professional education level than parents with a basic education.

From the list of the options of the rewards that are often used by parents, the most often selected were compliments, followed by shared experience, candy bars and appreciation. On the other hand, the most commonly used form of punishments is shared problem solving and rectification, followed by the keeping of favorite toys, threats, and physical punishment.

Preschool education promotes the personal development of preschool age children, contributes to their healthy emotional, intellectual and physical development and the learning of basic rules of conduct, fundamental life values and interpersonal relationships. Preschool education creates the basic prerequisites for continuing education and helps to remove inequalities in development among children prior to entering basic education and provides special educational care for children with special educational needs. A substantial role is played by parents at this age. They laid the foundations of the formation of habits, behaviors and actions of the child. Research of the parents' preferences of the use of rewards and punishments and their forms provides an interesting insight into this period of life. It may help to better understand the relationships within the family and the child's behavior during this period of their life.

References

- Čáp, J., & Mareš, J. (2001). *Psychologie pro učitele*. Praha: Portál.
- Kohn, A. (1999). *Punished by Rewards. The Trouble with Gold Stars, Incentive Plans, A's, Praise, and Other Bribes*. Boston: Houghton Mifflin.
- Luman, M., van Meel, C. S., Oosterlaan, J., & Geurts, H. M. (2012). Reward and punishment sensitivity in children with ADHD: validating the Sensitivity to Punishment and Sensitivity to Reward Questionnaire for Children (SPSR-C). *Journal of Abnormal Child Psychology*, 40, 145–157.
- O'Brien, B. S., & Frick, P. J. (1996). Reward dominance: Associations with anxiety, conduct problems, and psychopathy in children. *Journal of Abnormal Child Psychology*, 24(2), 223–240.
- Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS* (4th ed.). Maidenhead: Open University Press/McGraw-Hill.
- Thomas, R., & Zimmer-Gembeck, M. J. (2007). Behavioral outcomes of parent-child interaction therapy and triple p-positive parenting program: a review and meta-analysis. *Journal of Abnormal Child Psychology*, 35, 475–495.