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Adaptation Study of The Motivation Scale for The Preschool Children (DMQ18)

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Abstract; *Motivation is a difficult concept to define. When we look at the essence of the motivation concept, we can talk about the fact that it includes purpose, energy, will, perseverance, activation and intention. From the development point of view, internal motivation comes forth together with the interaction of a child with the environment after birth and collection of information about the world that he or she lives in. Studies show that the development of internal motivations have positive impact on both social and academic performance of children. This study was conducted to carry out the adaptation to Turkish of the Motivation Scale for Pre-school Children (DMQ18) by Morgan and Jozsa (2015). This scale was the revised version of the original scale by Morgan, Maslin-Cole, Harmon, Busch-Rossnagel, Jennings, HauserCram and Brockman (1993) which was being developed by them for 30 years. The revised scale was based on the data obtained by Morgan and Jozsa (2015) from their adaptation works in different age groups and cultures regarding the newborn and preschool children. The sample of the study consisted of 207 children in the age range of 36-72 months at an independent pre-school in the province of Kahramanmaraş. The seven-factor construct of the scale was confirmed as a result of the confirmatory factor analysis. The Cronbach's Alpha and Sperman Brown Two Quasi Test reliabilities of the scale were calculated and the scale was found to be a reliable measurement tool. Pearson Corelation test was conducted for the correlation between the factors of the scale and it was determined that there was a signification relation between the factors of the scale at a medium and high level. In addition, the analyses indicated a signification difference between the scores obtained from the scale in favour of the older age groups and girls.*

Key words: *preschool time, motivation, children*

Introduction

The studies for more than the last 20 years on the factors affecting the learning process highlight the concepts of self-regulation, meta cognition and motivation (Boekaerts, 1992; Borkowski, Chan and Muthukrishna, 2000; Pintrich & De Groot, 1990; Schunk, 2001; Winne & Hadwin, 1998). Among these concepts, motivation is considered to play an important role in student achievement. The concept of motivation looks like a

simple concept but it is very difficult to define it. On the other hand, it has an important effect on the attitude and learning behaviour of the learner (Deci & Ryan, 1985; Fairchild, Jeanne Horst, Finney & Barron, 2005; Ryan & Deci, 2000; Vallerand, Pelletier, Blais, Biere, Senecal, Valleries,1992). In fact, many studies indicate that motivation is related to various outputs like curiosity, persistence, learning and performance (Deci & Ryan, 1985; Ryan & Deci, 2000).

Many theorems on the definition of human behaviour attempted to describe the motivation concept. The first of these theorems is the behaviourist theorem. According to the behaviourists, motivation is explained by the concepts of external stimuli and reinforcer. It is suggested that the biological reactions towards stimuli activate and guide behaviour and that conditioning is the source of motivation (Kürüm, 2007). When we consider the cognitive development theories, an individual decides himself or herself whether to exhibit a behaviour or not, that is he or she has the chance to choose. An individual needs to be aware of the possible results of a behaviour so that he can make a choice. Therefore, an individual makes an evaluation before a behaviour by using mental processes and sets goals for himself, decides how to act to reach these goals and implements the actions. Therefore, from the point of view of the cognition theoreticians, motivation is involved with the factors that affect the choices and the reasons of people to act in a certain manner (Williams & Burden, 1999:119). The humanistic theoreticians argue that people are motivated continuously by an inherent need so that they can use their potentials (Woolfolk, 1998). In this theory, people strive to achieve their maximum potentials. In the hierarchy of basic needs, it is essential that the psychological and emotional needs of individuals to achieve a higher motivation and accomplishment (Erden & Akman, 2011, 224).

According to the self-determination theory, people are curious creatures and they are self-motivated. People are active and creative when necessary while they also try to learn, to improve themselves, specialize on new skills and realize their skills within the framework of their responsibilities. People are closely interested in motivation which refers to the way of mobilizing themself or other people. People are usually mobilized by the external factors like award systems, scores, evaluations or fear. However, they are usually motivated by their interest, curiosity and invaluable values they have. The interaction between the external factors, internal motivation and inherent requirements which have impact on people is considered within the field of the self-determination theory (Deci & Ryan, 1985, 1991; Ryan, 1995). Ryan and Deci (2000; 2015) conceptualized motivation within the framework of the self-determination theory between the extreme points of internal motivation and lack of motivation and taking external motivation into consideration.

Internal motivation refers to the conditions where an activity is realized by a person without award or control (McKinney, 2006; Reeve, 2002), while external motivation refers to the application of an activity and therefore differs from the internal motivation which refers that an activity is carried out for an inherent satisfaction (Ryan & Connell, 1989; Vallerand, 1997). Lack of motivation is the condition where a

person is deprived of the desire to act. Individuals loose motivation when they don't perceive a positive condition between the outputs and their behaviours. In other words, they don't get motivated neither internally or externally (Ryan, 1995).

When the motivation concept is examined from the development point of view, it can be said that the child interacts with the environment since birth and starts to collect information about world. This information collection process is related with the inherent internal motivation of the child. There is no external award or incentive. The children try to control the events around them between the months 9 and 12. Complex manipulation requiring activities like turning buttons on and off, discovering simple assemblies, opening and closing covers, removing and installing, telescoping game material, puzzles, rounding, pushing, walking by pulling or pushing as well as repeating movements and games with songs have important effect on the motivation development at these ages. The children between 24-36 months develop self-knowledge, evaluation and appreciation skills. At the same time, they try to realize a series of behaviour to ensure achievement. Children try to achieve success in the field of their interest while they also start to express their desire of social recognition. Working with rhythm instruments, matching games, wooden puzzles, ordering toys, rocking horses, house cleaning sets, works with shapes are the games and toys that are recommended for the development of motivation. The children of this period want to develop autonomy and autonomy development has an important place in the development of internal motivation (Cartlon & Winsler,1998).

Developing internal motivation in the pre-school learning environments has important effect on the future learning performance of the child. The education programs based on internal motivation support the creativity and intelligence development of internal motivation (Theodotou, 2014). The studies indicate that there are positive developments in the learning, performance, perseverance, creativity, self-confidence, liveliness and general welfare of the children who participate in the activities like mathematics, puzzle and reading that are prepared in line with the interests of children to improve internal motivation. In addition, development of internal motivation has a positive contribution to developing quality social relations, achievement in physical activities and environment related activities (Ryan &Deci, 2000). Montessori observed that several repetitions of children while playing with an object until they satisfy their internal needs brought a comfort on focusing and nerve system (Soydan, 2013). Ryan, Stiller and Lynch (1994) state that the development of internal motivation provides that children are more reliably attached to their caretakers or teachers and develop positive behaviour towards school with positive effect on their academic achievement. When all studies are evaluated, it is possible to say that the internal motivation of children is an important factor to shape the personality development and future life quality.

It is essential to observe and measure the motivation levels first to support the development of the internal motivations of the preschool children with regards to the development of appropriate education programs. However, there is no measurement instrument to measure the

motivation level for the preschool children in the country.

The Objective of The Study

1. To conduct the validity and reliability study of the of the Preschool Motivation Scale (DMQ18) developed by Morgan.

2. To determine whether there is any difference in the scores of the preschool children from the Motivation Scale according to age and sex.

Materials and Methods: Population and sample: The population of the study consists of the children in the age of 36-72 months attending to an independent nursery operating under the Ministry of National Education in the province of Kahramanmaraş. The sample of the study consists of 207 children as shown in Table 1 determined by the simple random cluster sampling method. 15% of the sample consists of children at the age of 36-48 months, 40,1% consists of children at the age of 48-60 months and 44,9% consists of 60-72 months. In addition, 50,7% of the children are girls and 49,3% are boys.

Table 1: Distribution of the demographic qualities of the sample

Component	Age group	n	%
Age	36-48	31	15,0
	48-60	83	40,1
	60-72	93	44,9
	Total	207	100,0
Sex	Girls	105	50,7
	Boys	102	49,3
	Total	207	100,0

Data Collection Instrument: The study used Preschool Motivation Scale (The Dimensions of Mastery Questionnaire DMQ18) as the data collection instrument. School Motivation Scale is a scale that has been developed for 30 years by Morgan, Maslin-Cole, Harmon, Busch-Rossnagel, Jennings, HauserCram, and Brockman (1993). The scale has different versions for newborns, pre-school and school age children as well as developmental disabilities. DMQ17 version was used from 1997 to 2014, and the scale was revised based on the data obtained by Morgan and Jozsa (2015) from the adaptation studies in different age groups and different cultures while the validity and reliability studies of the DMQ18 version were conducted. The Motivation Scale (DMQ18) was revised for the new born, preschool and school age children (Morgan, Wang, Barrett, Liao, Wang, Huan & Jozsa, 2016).

The Preschool Motivation Scale (DMQ18) revised in 2015 consists of 7 subscales and 39 items.

1. Cognitive/object Persistence = (1+14+17+23+29)/5: This subscale consists of 5 items that measure whether the child pays too much effort to complete any work started like repeating a certain skill until achieving, trying to complete given tasks even it takes long and to work for long times to achieve a difficult thing.

2. Gross Motor Persistence = (3+12+26+36+38)/5: This subscale consists of 5 items regarding the effort of children to achieve physical activities.

3. Social Persistence with Adults (8+15+22+33+37)/5: This subscale consists of 6 items measuring the persistence of the child in interaction with adults like trying to attract the attention of the adults, to make the adults to play with him/her and to continue this play.

4. Social Persistence with Children (6+7+25+28+32+35)/6: This subscale consists of 6 items measuring the persistence of the child in interaction with peers like trying to participate in the games of other children, to try to keep this game long, understanding the feelings of the other children and consoling them.

5. Mastery Pleasure (2+11+18+21+30)/5: This subscale consists of 5 items that measure the ability of the child to express satisfaction with feelings like joy and excitement when a certain job is accomplished.

6a. Negative Reactions- frustration/anger (9+13+16+19)/4:

6b. Negative Reactions- sadness/shame (5+24+34+39)/4: These subscales consist of 8 items including the expression of the negative feelings by the child of feelings like anger, embarrassment and fury when he/she cannot accomplish any job.

7. *General Competence* (4+10+20+27+31)/5 This subscale consists of 5 items measuring the skills of the child like understanding and doing things better than peers, and solving problems quickly.

Study for Adapting the Scale to Turkish: The language validity study of the scale by translating into Turkish has been conducted by 6 experts including 3 foreign language experts and 3 specialists of preschool education with command of both languages.

The scale was first translated to Turkish by 3 language experts. 3 versions of the scale in Turkish were reviewed a new form in Turkish with the best translation of the items was obtained. In the second stage, the latest Turkish form of the scale was translated back to English by experts and the consistency of the scale in the original language was examined. After these works by the experts, it was determined that the scale was consistent with the item meanings in the original text.

The third stage in the language validity of the scale included the opinions of 3 experts of preschool education working at universities with command of both languages. These experts examined whether the items in the scale correspond to the meaning in the original language and they made the final corrections.

In the final stage, 4 experts evaluated the scale items with respect to scope and conformity to culture and they finalized the scale as ready for application. 5 preschool teachers were asked to fill in the scale that was ready for application and thus the scale items were finalized after testing for clarity.

Data Analysis: Confirmatory factor analysis was conducted to confirm the factor construct of the Motivation Scale.

The confirmatory factor analysis attempts to test whether the concerned construct was confirmed or not based on

the data obtained by a measurement instrument that was developed in line with a theoretical structure. The confirmatory factor analysis tests pertinence of a previously developed, defined and limited construct as a model. The confirmatory factor analysis is conducted to reveal the construct validity (Çokluk, Şekercioğlu & Büyüköztürk, 2010).

Gorsuch (1983) argues that the confirmatory factor analysis tests the pre-determined assumptions while the explanatory factor analysis needs to be done when there is no explanatory analysis (cited from Gorsuch: Çokluk et al. 2010). Explanatory factor analysis can determine the factor construct by an eclectic point of view by doing an explanatory and confirmatory factor analysis for the items developed by the researcher based on sound theoretical foundations. The intercultural factor adaptation studies suggest the start of analysis directly with the confirmatory factor analysis. The factor pattern of the scale to be used for the adaptation study in own culture was revealed by qualitative and quantitative studies and experimental evidences were found on the construct validity of the scale. Therefore, confirmatory factor analysis should be used in the scale adaptation studies to test whether the scale maintains the factor constructs in the target culture as well (Çokluk et al. 2010). In line with the concerned views in the literature, it was decided to carry out confirmatory factor analysis for the Motivation Scale. The confirmatory factor analysis was done in the Lisrell 8.7 program.

The SPSS22 program was used to determine the correlational relation between the factors of the scale confirmed by the confirmatory factor analysis and factor constructs. Pearson correlation test was conducted for the correlational relation. The reliability analysis of the scale included the calculation of the Spearman Brown split-half test reliability coefficient and Cronbach Alpha reliability coefficient. In addition, the scores of the children from the motivation scale were subjected to the independent sample t test and one way variance analysis to examine according to the variables of sex and age.

Results and Discussion

This section includes the findings related to the factor analysis of the scale and scores of the children from the motivation scale according to the variables of age and sex.

The model set as a result of the Confirmatory Factor Analysis (CFA) in the Lisrell 8.7 program, the 7 factor structure of the scale was confirmed after the modifications stipulated by the program. Standardized solutions and t values were examined in the confirmatory factor analysis. The standardized solutions were found to be significant at level 0.01 and the items were significant at level .01. If the t values at CFA are more than 1.96, they are accepted to be significant at level .05, and at level .01 if they are more than 2.56 (Çokluk et al., 2010). Table 2 includes the t values and significance levels related to the scale items.

Table 2: t Values of the Items and Motivation Scale CFA Significance Levels as a result of the

Dimensions	Old Item No	New Item No	T	p
Factor 1	Item 1	Item 1	14.27	.000
	Item 14	Item 2	14.24	.000
	Item 17	Item 3	14.68	.000
	Item 23	Item 4	11.23	.000
	Item 29	Item 5	7.48	.000
Factor 2	Item 3	Item 6	12.77	.000
	Item 12	Item 7	13.09	.000
	Item 26	Item 8	9.67	.000
	Item 36	Item 9	12.47	.000
	Item 38	Item 10	9.25	.000
Factor 3	Item 8	Item 11	11.72	.000
	Item 15	Item 12	12.05	.000
	Item 22	Item 13	13.96	.000
	Item 33	Item 14	12.97	.000
	Item 37	Item 15	12.64	.000
Factor 4	Item 6	Item 16	11.28	.000
	Item 7	Item 17	9.49	.000
	Item 25	Item 18	12.82	.000
	Item 28	Item 19	13.41	.000
	Item 32	Item 20	11.61	.000
	Item 35	Item 21	11.05	.000
Factor 5	Item 2	Item 22	11.58	.000
	Item 11	Item 23	13.58	.000
	Item 18	Item 24	13.13	.000
	Item 21	Item 25	13.67	.000
	Item 30	Item 26	11.86	.000
Factor 6	Item 9	Item 27	11.17	.000
	Item 13	Item 28	12.73	.000
	Item 16	Item 29	11.38	.000
	Item 19	Item 30	12.74	.000
	Item 5	Item 31	10.33	.000
	Item 24	Item 32	7.53	.000
	Item 34	Item 33	8.65	.000
	Item 39	Item 34	3.65	.000
Factor 7	Item 4	Item 35	13.37	.000
	Item 10	Item 36	15.41	.000
	Item 20	Item 37	13.49	.000
	Item 27	Item 38	14.69	.000
	Item 31	Item 39	13.11	.000

After the evaluation of the t values of the scale, goodness of fit indices are examined. Table 3 includes goodness of fit indices of the CFA results of the scale.

Table 3: CFA Results for the Seven Factor Model of the Motivation Scale (DMQ18)

Model	$\chi 2$	sd	$\chi 2$/df	RMSEA	RMR	SRMR	CFI	NFI	NNFI	GFI	CFI
	1523.78**	674	2.26	0.078	0.065	0.076	0.97	0.95	0.97	0.72	.097

***p< 0.01*

As a result of the confirmatory factor analysis according to Table 3, the degree of freedom of the model $\chi 2$ = =1523.78 was found to be (df) =674, $\chi 2$/df=2.26. The model is statistically significant (p<0.01). The rate of Chi-Square/df less than 3 refers to perfect fitness and less than 5 refers to good fitness. The other fitness measures of the scale in the path scheme was found to be REMSEA=0.078. A RMSEA value less than .05 refers to perfect fitness and less than .08 refers to good fitness. The SRMR fitness index of the scale was found to be 0.076 and the RMR fitness index was found to be 0.065. Having a RMR less than .05 refers to perfect fitness and less than .08 refers to good fitness (Çokluk et al.,2010:272; Schermelleh-Engel & Moosbrugger, 2003).

When we look at the other fit indices we found that NNFI=0.97, NFI=0.95 and CFI=0.97, GFI= 0.72. A value of NNFI, NFI and CFI indices more than .95 refers to perfect fitness and more than .90 refers to good fitness (Çokluk et al.,2010). In this scope, it is possible to say that the NNFI, NFI and CFI values have perfect fitness. Low GFI index of the scale can be explained by the size of sample. GFI is the fitness index that is affected by the size of the sample. It gives higher results in big samples (Çokluk et al.,2010). When we evaluate the fit indices of the scale, the adapted scale is found to meet the model data fitness for the seven-factor structure. Table 4 includes the Cronbach Alpha and Sperman Brown Split Half Test reliability tests.

Table 4: Motivation Scale (DMQ18) Cronbach Alpha and Spearman Brown Split Half Test Reliability Analysis

Motivation Scale (DMQ18)	Cronbach's Alpha	Sperman Brown Two Split Test Reliability
Factor 1	.86	.81
Factor 2	.84	.79
Factor 3	.88	.83
Factor 4	.87	.80
Factor 5	.88	.90
Factor 6	.84	.77
Factor 7	.91	.90

When we look at the Table 4, we can say that the reliability results of the Motivation Scale (DMQ18) is high. The Alpha reliability coefficients of the scale vary between .84 and .91. The Sperman Brown Split Half Test reliability coefficients vary between .77 and .90.

Having the reliability coefficient as near to 1 as possible in the Likert type scales can give an idea on the reliability of the scale (Tezbaşaran,1997). It is generally expressed that having a reliability coefficient of the scale of .70 and more in the psychological tests is sufficient for the reliability of the scale (Büyüköztürk, 2007). When we look at the reliability coefficients of the Motivation Scale, we can say that the scale is a reliable measurement tool. Table 5 includes the information on the correlation between the factor scores of the Motivation Scale

Table 5:Pearson Correlation on the Motivation Scale Factor (DMQ18)

		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Factor 1	r	1	,680**	,584**	,612**	,530**	,436**	,802**
	p		,000	,000	,000	,000	,000	,000
	n	207	207	207	207	207	207	207
Factor2	r	,680**	1	,619**	,667**	,675**	,398**	,639**
	p	,000		,000	,000	,000	,000	,000
	n	207	207	207	207	207	207	207
Factor 3	r	,584**	,619**	1	,823**	,590**	,603**	,614**
	p	,000	,000		,000	,000	,000	,000
	n	207	207	207	207	207	207	207
Factor4	r	,612**	,667**	,823**	1	,626**	,627**	,683**
	p	,000	,000	,000		,000	,000	,000
	n	207	207	207	207	207	207	207
Factor 5	r	,530**	,675**	,590**	,626**	1	,422**	,581**
	p	,000	,000	,000	,000		,000	,000
	n	207	207	207	207	207	207	207
Factor 6	r	,436**	,398**	,603**	,627**	,422**	1	,510**
	p	,000	,000	,000	,000	,000		,000
	n	207	207	207	207	207	207	207
Factor 7	r	,802**	,639**	,614**	,683**	,581**	,510**	1
	p	,000	,000	,000	,000	,000	,000	
	n	207	207	207	207	207	207	207

**. p 0.01 (two-way).

When we look at the Table 5, we see that there is a medium and high level positive and significant relation between the factors of the Motivation Scale (DMQ18) ($p<0.01$).

Single way variance analysis was conducted to determine whether the scores of the children from the Motivation Scale vary depending on age. Table 6 includes the results.

Table 6: Single way variance Analysis Test regarding the scores of the Children from the Motivation Scale (DMQ18) according to the variable of age

		Chi Square Total	df	Square Average	F	P	Source of Difference Sheffe
Cognitive Persistence	Between Groups	105,603	2	52,801	4,263	,015*	36-48 Months< 60-72 Months
	Inside groups	2527,006	204	12,387			
	Total	2632,609	206				
Gross Motor Persistence	Between groups	34,613	2	17,307	1,583	,208	
	Inside groups	2230,440	204	10,934			
	Total	2265,053	206				
Social Persistence with Adults	Between groups	44,136	2	22,068	1,532	,219	
	Inside groups	2939,169	204	14,408			
	Total	2983,304	206				
Social Persistence with Children	Between groups	188,550	2	94,275	5,494	**,005***	36-48 Months <48-60 Months 36-48 Months <60-72 Months
	Inside groups	3500,667	204	17,160			
	Total	3689,217	206				
High level satisfaction	Between groups	43,326	2	21,663	1,796	,169	
	Inside groups	2461,002	204	12,064			
	Total	2504,329	206				
Negative attitudes	Between groups	116,066	2	58,033	1,826	,164	
	Inside groups	6481,857	204	31,774			
	Total	6597,923	206				
Overall effectiveness	Between groups	135,755	2	67,878	4,875	**,009***	36-48 Months <48-60 Months 36-48 Months <60-72 Months
	Inside groups	2840,660	204	13,925			
	Total	2976,415	206				

When we look at the Table 6, we found that there is significant difference between the scores of the children from the dimensions of the Motivation Scale like Cognitive Persistence, Social Persistence with Adults and Overall Effectiveness. ($p<0.05$). After the Sheffe test to find the source of the difference, the difference in the dimension of the *Cognitive Persistence* was found to be in favour of the children of 60-72 months between the children of 36-48 months (X=17.00) and those of 60-72 months (X= 19.12). The significant difference in the dimension of Social Persistence with Children is in favour of the children of 48-60/60-72 months between the children of 36-48 months (X=19.25), of 48-60 months (X=21.54) and 60-72 months (X=22.09). Again there is a significant difference in favour of the children of 48-60/60-72 months between the children of 36-48 months (X=16.19), 48-60 months (X=18.13) and 60-72 months (X=18.60).

The independent sample t test was conducted to determine whether the scores of the children from the Motivation Scale (DMQ18) differ according to sex. Table 7 includes the results.

Table 7: Independent Sample *t* Test Related to the Scores of Children from the Motivation Scale According to Sex

	Sex	N	X	t	sd	p
Cognitive Persistence	Girls	105	19,2667			**.008***
	Boys	102	17,9608	2.666	205	
Gross Motor Persistence	Girls	105	18,8762			
	Boys	102	18,9902	-247	205	805
Social Persistence with Adults	Girls	105	18,2952			
	Boys	102	17,1373	2.209	205	**.028***
Social Persistence with Children	Girls	105	22,1238			
	Boys	102	20,7549	2.352	205	**.020***
High level satisfaction	Girls	105	20,6476		205	
	Boys	102	19,7941	1.770		.078
Negative attitudes	Girls	105	28,6190		205	
	Boys	102	26,8725	2.241		**0.26***
Overall effectiveness	Girls	105	18,5714		205	**.046***
	Boys	102	17,5196	2.005		

$p<0.05$

Morgan, Maslin-Cole, Harmon, Busch-Rossnage, Jennings, Hauser-Cram and Brocckman (2016) stated in their study that the children in the age group of 1-2 years have lower scores from the scale compared to the children in the older age groups. Evaluated from the developmental point of view, it was considered that the social motivation scores in the smaller age groups are lower as the social motivation increases between the ages of 1-5 years. These

results support the findings of the present study. The reason of low score may be the fact that the children in the age group of 36-48 months are less effective with respect to language development compared to the children in the older age group. On the other hand, this difference may be caused by the fact that this age group is the one where socialization just starts and that the older age group has more developed social behaviour. On the other hand, the older age group can be considered to have more developed persistence behaviour as they spent more time in the education environment.

When we review the Table 7, we see that there is a significant difference in favour of girls ($p<0.05$) in the dimensions of *Cognitive Persistence, Social Persistence with Adults, Social Persistence with Children, Negative Attitudes and Overall Effectiveness* among the scores from the Motivation Scale. In the studies by Morgan, Maslin-Cole, Harmon, Busch-Rossnage, Jennings, Hauser-Cram and Brocckman (2016) with (DMQ18), it was stated that the scores of the boys had significant difference than the girls in the sub dimension of Gross Motor of the Motivation Scale (DMQ18) among the preschool children. They found significant difference in favour of girls in the scores of High Level Motivation among the children of 1 years.

Conclusion

The study included the adaptation of the Motivation Scale for the Preschool Children (DMQ18) by Jossa and Morgan. The 7-factor structure of the scale was confirmed after the Confirmatory Factor Analysis. Cronbach's Alpha and Sperman Brown Split Half Test reliabilities were calculated for the reliability of the scale and it was determined that the scale was a reliable measurement instrument. Pearson Correlation test was conducted for the correlation between the factors of the scale and a medium and high level significant relation was found between the factors of the scale. Finally, the analyses found a significant difference in favour of the girls among the scores of the scales ($p<0.05$). The followings can be suggested in the light of these results:

The life of the children is affected significantly by maintaining and developing the internal motivation that is possessed by the preschool children. Therefore, the education programs that are prepared by using different methods and techniques developing motivation of the preschool children can be implemented to measure the effect of the program on the motivation development of children. The family and teacher based factors with effect on the internal motivation of children may be studied.

References

Boekaerts, M. (1992). "The Adaptable Learning Process: Initiating and Maintaining Behavioural Change". Applied Psychology: An International Review, No:41, pp:377–397.

Büyüköztürk, Ş.(2007). "Data analysis handbook for social sciences".Pegem Press,Ankara .

Borkowski, J. G., Chan, L. K. S., & Muthukrishna, N. (2000). "A Process-Oriented Model of Metacognition: Links Between Motivation And Executive Functioning". In G. Schraw & J. Impara (Eds.), Issues in The Measurement of Metacognition (pp. 1–41). Lincoln, NE:

Buros Institute of Mental Measurements, University of Nebraska.

Carlton, M. P., & Winsler, A. (1998). Fostering Intrinsic Motivation in Early Childhood Classrooms. Early Childhood Education Journal, Vol:25 No:3 pp:159-166.

Çokluk, Ö. & Şekercioğlu, G.& Büyüköztürk, Ş. (2010"Multivariate Statistics for Social Sciences SPSS and Lisrell Applications". Pegem Press, Ankara.

Deci, E.& Ryan, R.(1985). "Intrinsic Motivation and Self-determination in Human Behavior". New York: Plenum pp:38.

Deci, E. L. & Ryan, R.M. (1991). "A Motivational Approach to Self: Integration in Personality". Nebraska Symposium on Motivation. Perspectives on Motivation, edited by R. Dienstbier. (pp: 237-288). Lincoln, NE: University of Nebraska Press.

Erden, M. & Akman, Y.(2011). Eğitim Psikolojisi [Educational Psychology]. Arkadaş, Ankara pp:67.

Fairchild, A. J., Horst, S. J., Finney, S. J. & Baron, K. E. (2005). "Evaluating Existing and New Validity Evidence Fort He Academic Motivation Scale". Contemporary Educational Psychology, Vol:30 pp:331- 358.

Jozsa,K. &Morgan, G.A. (2015). "An Improved Measure of Mastery Motivation: Reliability and Validity of the Dimensions of Mastery Questionnaire (DMQ 18) for Preschool Children". Hungarian Educational Research Journal, Vol:5 No:4 pp: 1–22.

Kürüm, E. Y. (2007). "The Effect of Motivational Factors on The Foreign Language Achievement of Students in University Education". Thesis. Ankara.

McKinney, K. (2006). Encouraging Students' Intrinsic Motivation. Retrieved July 25, 2006, from http://www.cat.ilstu.edu/additional/tips/intMotiv.php

Morgan,G.A.&Maslin-Cole,C.&Harmon,R.J.&Busch-Rossnage,N.A.&Jennings,K.D.& Hauser-Cram,P.& Brocckman L. (2016). "Parent And Teacher Perceptions Of Young Children's Master Motivation. Mastery Motivation in Early Childhood: Development, Measurement and Social Processes" Edited by D. J. Messe Roudledge.pp:120-129

Pintrich, P., R. & De Groot, E. V. (1990). "Motivational and Self-Regulated Learning Components of Classroom Academic Performance". Journal of Educational Psychology, Vol: 82 No:1 pp:33-40.

Reeve, J. (2002). "Self-Determination Theory Applied to Educational Settings". In E. L. Deci & R. M. Ryan (Eds.). Handbook of Self-Determination Research (pp. 183– 203). New York: University of Rochester Press.

Ryan, R. M., & Connell, J. P. (1989). "Perceived Locus of Causality and Internalization". Journal of Personality and Social Psychology, Vol:57 No:7 pp:49-761.

Ryan, R.M. and Deci, E, L. (2000). "Self-Determination Theory and The Facilitation of Intrinsic Motivation, Social Development and Well-Being". American Psychologist, Vol: 55 No:1 pp:68-78.

Ryan, R. M., Stiller, J., & Lynch, J. H. (1994). "Representations of Relationships to Teachers, Parents, and Friends as Predictors of Academic Motivation and Self-Esteem. Journal of Early Adolescence", Vol:14 No:2 pp: 226- 249.

Ryan, R. M. (1995). "Psychological Needs and The Facilitation of Integrative Processes". Journal of Personality, Vol:63 pp:397-427.

Ryan, R. M., & Deci, E. L. (2015). "Toward a Social Psychology of Assimilation: Self-Determination Theory in Cognitive Development and Education," In Self-Regulation and Autonomy: Social And Developmental Dimensions Of Human Conduct, Eds B. W. Sokol, F. M. E. Grouzet, and U. Muller (New York, NY: Cambridge UniversityPress),pp:191–207.

Schermelleh-Engel, K. & Moosbrugger, H. (2003). Evaluating The Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. Methods of Psychological Research Online, Vol:8 No:2 pp:23-74.

Schunk, D. H. (2001). "Social Cognitive Theory And Self-Regulated Learning". In B. J.Zimmerman & D. H. Schunk (Eds.). Self-Regulated Learning and Academic Achievement: Theoretical Perspectives (Vol. 2, pp. 125–152). Mahwah, NJ: Lawrence Erlbaum.

Soydan,S.(2013) "The Strategies of Montessori Teachers to Raise the Curiosity in ChildrenMehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi, Vol:13 No: 25 pp:269 – 290.

Tezbaşaran, A. (1997)." Scale Development Guide for the Likert Type "(Second Edition). Ankara: Turkish Psychological Association Publications.

Theodotou, E. (2014). "Early Years Education: are Young Students Intrinsically or Extrinsically Motivated Towards School Activities? A Discussion about The Effects of Rewards on Young Children's Learning". Research in Teacher Education.Vol: 4 No:1 pp: 17–21.

Vallerand, J. Pelletier, R. L. G., Blais, M.R., Biere,N. M., Senecal, C., Valleries, E. F. (1992). "The Academic Motivation Scale: A Measure of Intrinsic, Extrinsic and Amotivation In Education". Educational Psychological Measurement. No:52 pp:1003-1017.

Vallerand, R. J. (1997). "Toward A Hierarchical Model of Intrinsic and Extrinsic Motivation". In M. P. Zanna (Ed.), Advances in Experimental Social Psychology Vol. 29 pp: 271-360. San Diego, CA: Academic Press.

Williams, M. and R. L. Burden (1999). "Psychology for Language Teachers". Edition, Cambridge University Press, Cambridge. pp:48

Winne, P. H., & Hadwin, A. F. (1998). "Studying as self-regulated learning. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), Metacognition in Educational Theory and Practice" (pp. 277–304). Hillsdale, NJ: Erlbaum.

Woolfolk, A. E. (1998). "Educational Psychology". Boston: Allyn&Bacon