

# What is the Reality of Preschool in Jordan?

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## Abstract

The present study evaluated the reality of the preschools in Jordan. A random sample of 500 preschool teachers participated in this study. Quantitative and qualitative methods were used. Preschools' learning environment quality was assessed using the revised version of the Early Childhood Environment Rating Scale (Harms, Clifford, & Cryer, 1998). Multi-level statistical analyses revealed that quality of government preschools as measured by the ECERS-R was evident in two of the seven subscales as high quality. These were for interaction and program structural subscales, while the remaining dimensions of space and furnishing, personal care routine, language reasoning, activities, and parents and staff are of good quality. This study demonstrated the importance of continuing to provide high quality learning environment in Jordanian preschools and of incorporating evaluation of the same into education reform.

**Keywords:** Quality - Learning Environment – Government Preschool

## 1. Introduction

The quality of childhood care and education has gained considerable attention and become a priority for educational practitioners and policy makers (Munton, et al., 1997). Indeed, the quest for quality in education is a common phenomenon in various countries around the world (Anning et al., 2004; Kalkan, 2009). The cumulative evidence of research on early care and education and children's development is clear: quality is consistently associated with children's development. For example, Cassidy et al. (2005) state that high quality is associated with the outcomes that all parents are expecting to see in their children such as cooperation with adults, the ability to initiate and sustain positive exchanges with peers and early competence in math and reading. This is not surprising as research over the past thirty years has shown that learning environment is a strong determinant of the student's learning; children learn better when they perceive their environment positively. Researchers have also found that quality child care brings about more developmental benefits for children from low-income families than those from the higher-income group (Burchinal et al., 2000 b). The role of the learning environment is critical to children in preschools and it has a powerful positive influence on the children's development because preschool environment includes a chance for great interaction with physical surroundings, social and emotional components, and cultural influences that exist in a learning situation (Burchinal et al., 2000 a). Given the wealth of supporting evidence that come from the research on brain development indicating the importance of high quality preschools, Sylva, et al.(2006) showed that children enrolled in high quality preschools tend to be more successful in later stages, were more competent socially and emotionally and showed higher intellectual development during early childhood period.

Such research has added depth to the knowledge of the effects of quality learning environment on this important developmental period of children (Barnett, 2004). Quality of preschools is of interest in Jordan because of their critical impact on children's development. The future of the Jordanian economy depends on their young people who needs to be well educated and resourceful. Due to the effect of quality on successful positive outcomes, it is obvious from these studies that it is necessary to conduct a comprehensive study to assess the status of the learning environment quality in preschools of Jordan., This then is the intent of the present research which is to assess the status quo in government preschools in Jordan.

## 2. Early Childhood Education in Jordan

So far, Jordan as a developing country has paid a lot of attention to early childhood education (Khore, 2003). In response to the needs of this sector and to the development of children's education at the national level, Jordan is one of the countries in the world eager to work on and follow the Early Childhood Development (ECD) standards (MoE, 2010). As such, the Ministry of Education in 1999 established an extensive Early childhood development (ECD) Strategy that provided an overview of the current situation of children in Jordan in different areas such as childhood development, quality in preschools, physical environment in preschool, health, safety, children with special needs, home learning environment at the family and society levels, and licensing standards for preschools (Kaga, 1989).

Because, half of Jordan's population is children and because the number of working mothers in Jordan is increasing, the government wants to provide a safe and healthy environment for children (Al-Hassan, 2005). This is a real investment in Jordan (MoE, 2008a). Despite the fact that the Jordanian government is trying to improve early childhood education, much needs to be done in the area of the quality of learning environment (Al-Hassan et al., 2009).

The MoE has worked effectively and made some improvements by completing some plans and projects such as: (1) The issuance of the national interactive curriculum; (2) Setting the criteria and the conditions of licensing preschool and kindergartens; (3) Preparing training courses to all teachers in government preschools (Wisconsin University Programme); (4) Coordinating with the Jordanian universities to provide early childhood education majors in order to improve teachers; and (5) Working on legislation which would entrench children in the best possible environment, supportive of their health, safety, and optimal development (MoE, 2002).

Queen Rania established an academy for teacher training in 2008 as an independent institution to prepare and improve teachers as part of the implementation of educational policies in Jordan (UNESCO, 2006, 2008). She believes that educational training centers in each province can provide each teacher with the skills needed. She stated that education is a national priority to strengthen the role of the educational process in creating a skillful individual at the local level and for the Arab nation. She stressed that access to high-quality education is a key factor in determining the opportunities that will be available for the children in the future (UNICEF, 2000).

### 3. Research Questions

1. What is the current status of the quality of learning environments in government preschools in Jordan in terms of: i) space and furnishing, ii) personal care routines, iii) language-reasoning, iv) activities, v) interaction, vi) program structure, and vii) parents and staff?
2. What are the strengths and weaknesses of the learning environment in the selected government preschools?
3. Are there any significant differences in the quality of the learning environment based on preschool location?
4. Are there any significant differences in the quality of the learning environment based on teachers' experiences?
5. In what ways could the quality of the learning environment in the selected government preschools be improved?

### 4. Objectives of the Study

The overall purpose of this research is to explore the quality of the learning environment in preschools in Jordan. The specific objectives of the study are as follows:

1. To assess the reality of the preschools in Jordan in terms of: Space and Furnishing, Personal Care Routines, Language Reasoning, Activities, Interaction, Program Structure, Parents and Staff.
2. To identify the strengths and weaknesses of preschools in Jordan.
3. To investigate the ways of improving of preschools..
4. To examine if there are significant differences in the level of reality based on teaching experiences.
5. To examine if there are significant differences in the level of reality based on location of preschools.

### 5. Related Research Studies

Tan- Niam and Ling (2000) used ECERS in Singapore. A random sampling procedure was used to select 16 day care centers in Singapore. Eight children, aged four years, were randomly selected from each center and a total of 122 children participated in the study. Quality was measured by using ECERS. Two observers were trained to rate the target centers. The findings showed that most centers were rated within the minimal standard. The results showed that, on the average, centers scored slightly above minimal standards in the areas of: Interaction, program structure, activities, parent and staff, furnishing and space, whereas the language reasoning and personal care routines were at the good level.

Fuger et al. (2003) conducted a study to collect information about the Missouri Preschool Project sites and to evaluate quality. The first observational assessments was made in 216 Missouri Preschool Project classrooms, which were located in 71 counties. A second observation was conducted in a subset of the classrooms. Time 1 and Time 2 assessments were conducted in 101 classrooms, located in 58 counties, to provide a comparison of programme quality over time during the implementation of the Missouri Preschool Project. Early Childhood Environment Rating Scale –Revised (ECERS-R) was used to evaluate the level of quality. The results at Time 1 scores suggested a good level of quality. The outside observers rated lower mean scores on the Activities which corresponded to quality at a level between minimal and good. In contrast, observers rated highest for the Interactions especially for staff-child interactions. Comparatively, at Time 2, the overall dimension scores ranged from a good to excellent rating for the 101 observed classrooms. Again, the Activities dimension was the lowest. The same individual items also remained lower. In addition, the Interactions dimension continued to be the highest one. At Time 2, the highest individual items within that subscale were staff-child interactions and interactions among peers.

Carl and Fiene (2003) conducted their study to improve the quality of child care in Lycoming County in USA. They employed (ECERS-R), Family Day Care Rating Scale (FDCRS), and the Arnett Caregiver

Interaction Scale (CIS). They also enlisted three reliably-trained assessors to conduct observations on 8 child care centers, 6 family group homes, 4 family homes and 2 non-regulated homecare providers. Overall, they found out that the quality of Lycoming County childcare centers were under the adequate to good range. The ranking of highest subscale scores were Interaction (5.2), Parents (4.86), Programme Structure (4.82), Language-Reasoning (4.75), Space and Furnishings (4.64), whereas, Personal Care Routines (4.03), Activities (3.64) were in the medium level of quality.

Fiene's (2003) study aimed to assess early childhood quality in 372 Head Start programmes, preschools, child care centers, family child care homes, and relative/neighbour care providers in Pennsylvania State. The Early Childhood Environment Rating Scale-Revised (ECERS-R), Family Day Care Rating Scale (FDCRS), and the Arnett Caregiver Observation Scale were used to measure the quality of the settings. By using ECERS-R, Head Start programmes showed higher quality than all other settings. Head Start was the only one that ranged 4.0 or above on all the dimensions: Space and furnishings, and the Activities dimensions were the lowest scores. Preschools/nursery schools had the second highest scores ranging on Personal Care and Interactions and on four of the dimensions. Preschools' scores were significantly lower than the Head Start programmes' in Space and furnishing; Activities; Programme Structure; and Parents and Staff.

Al-Taib (2006) conducted a study to evaluate the quality of government kindergarten in Kuwait. A stratified random sample was selected and he used questionnaire, observation and interview. The data was collected from 300 kindergartens for children aged 4 to 5 years. The data was collected by the researcher and he trained an assistant researcher on how to use Early Childhood Environment Rating Scale- Revised (ECERS-R). The findings indicated that the kindergartens were at the good level, higher scores were recorded for Interactions, parent and staff. Meanwhile, Programme structure, Space/furnishings, Language/reasoning, Personal care routines and Activities were at the medium level.

Barnard et al. (2006) conducted their study to evaluate Pennsylvania's Keystone STARS and to determine if the Keystone STARS programme was improving the quality in participating childcare programmes. Data was collected from 356 childcare centers, 81 group child daycare homes, and 135 family child daycare homes. This study used the Early Childhood Environment Rating Scale-Revised (ECERS-R) (Harms, Clifford, & Cryer, 1998), and the Family Day Care Rating Scale (FDCRS) (Harms and Clifford, 1989). The sample was select randomly. The results showed that Keystone STARS centers attained higher levels of quality in terms of Interaction ( $M = 6.21$ ), Parent and Staff ( $M=5.95$ ), Language and Reasoning ( $M = 5.85$ ), Activities ( $M= 5.55$ ), Programme Structure ( $M = 5.32$ ), Space and Furnishing ( $M = 5.27$ ), Personal Care Routines ( $M = 4$ ). The study also discovered that the quality improved through providing the center with teachers with college degrees that led to them providing higher quality early education and care. The study also found that teachers with at least five years of experience had significantly higher than those with less experience.

In Egypt, Abdullah, (2007) conducted a study to compare the status of the quality of the learning environment in private and public kindergartens. A random sample was selected ( $n=500$ ) from the private sector, and ( $n=500$ ) from the public sector to participate in the study. The researcher used ECERS-R to evaluate the quality. He found that the quality of public kindergartens was significantly higher than the quality of private kindergartens. Overall, public kindergartens were at the good quality level, especially in terms of Activities and Programme Structure. However, private kindergartens were at minimal level, especially for Space and Furnishing, Interaction, Activities, Programme Structure, Parent and staff. Personal care routine and language reasoning were inadequate.

Al-sa'de (2008) carried out a study in Bahrain to evaluate public kindergartens. A stratified random sample of kindergartens was selected to participate in the study ( $n = 85$ ). Independent observers rated the quality of kindergarten environment by using ECERS-R (1998). Overall, 11% of public kindergarten environment were reported to be inadequate, 45% were of minimal quality, 41% were good and 3% were excellent. Space and Furnishing and Programme Structure were inadequate; whereas Personal care Routines, Language Reasoning, Activities, Interaction, and Parent and Staff were good.

Hofer (2008) opted to measure quality in a prekindergarten classroom by using the ECERS-R. Three groups of previously-collected data were used in this study. The first set of data comprised ECERS-R scores from 118 Pre-Kindergarten classrooms collected as part of an Early Math Project. Of those 118 classrooms, 70 classes were located in Tennessee and 48 in California. The second set comprised of ECERS-R scores from 122 classrooms in Missouri collected as part of a Quality Rating System (QRS) pilot study. The third data set comprised of ECERS-R scores from 21 classrooms in Tennessee collected as part of the Preschool Curriculum Evaluation Research (PCER). The analysis revealed that most pre- kindergartens from all the three data sets ranged from the minimal level. Personal Care Routines and Activities had the lowest mean scores out of the six dimensions. However, the dimensions with the highest mean were Interactions, Space and Furnishing, Programme Structure and Language Reasoning.

Peisner-Feinberg and Bryant (2008) conducted a study to assess the quality of care received by preschool in Cuyahoga County in Ohio. A stratified random sample was selected in Cuyahoga County

observation and interviews were used. The data was collected from a sample of 177 classrooms of 3 to 5 year olds. No public preschool was selected in this study. Data was collected by trained observers using two instruments: the Early Childhood Environment Rating Scale – Revised (ECERS-R) and Caregiver Interaction Scale (CIS). The findings showed that preschools scored a medium range of quality; scores were higher with regard to Interactions. Scores were in the medium levels for the five remaining dimensions: Programme structure, Space/furnishings, Language/reasoning, Personal care routines, and Activities, Parent and staff.

Kalkan and Akman (2009) conducted an investigation to examine preschools' quality in terms of physical environment in Turkey and compared the quality of public preschools and private ones. They randomly selected preschools located in Ankara using ECERS (Harms et al., 1980). They found that quality was at a medium level and no significant differences were found among the three kinds of preschools in terms of the educational environment. The results showed Program Structure and Space and Furnishing were at lowest scores. Scores were in the below good levels for the five remaining dimensions: Language/reasoning, Personal Care Routines, Activities, Interaction, and Parent and staff.

Al- Darabah et al. (2011) conducted a study to evaluate the quality of activities in learning environment within the preschools in Jordan in government and private sector. A stratified random sample of preschools was selected to participated from government (n = 84) and private preschools (n = 23). Assistant observers measured the activities of preschools by using the ECERS-R. The data revealed that 13% of government preschools were found to have inadequate quality in activities, while 43% of preschools were of minimal quality and 43% were of good quality and 1% was excellent. The quality of government preschools' activities was significantly higher than the quality of private preschools' activities.

**Phillipsen et al.** (1997) carried out their study to examine the relations between quality and selected characteristics of lead caregiver, classroom, center, and director. Non-profit and for-profit centers were randomly sampled in four states. Interviews, questionnaires, and observations were used to assess quality. Overall, quality was higher in states with more stringent childcare regulations, nonprofit centers and preschool classrooms. Quality was higher in classrooms with moderately-experienced and better-paid teachers and with more experienced directors. In preschool classrooms, quality was higher in classrooms with teachers with more education, a moderate amount of experience, and higher wages. They suggested that there was an increase in the stringency of state child care regulations and there were efforts to reallocate the budget of child care programmes.

Deniece (2008) has also conducted a study to evaluate Arkansas' Better Chance Programme and to see if there was any relationship between teacher qualifications, quality of care, and student achievement outcomes. Teacher qualifications were measured by designed questionnaire. The variables of teacher qualifications were wage, experience, education, and training. The quality was measured by ECERS-R. A significant difference was found in children achievement based on teacher qualifications (wage, experience and training). A significant difference was found in quality of care based on teacher qualifications (experience and training).

Behring (2004) examined the relationship between Head Start teachers' characteristics (formal education, years of teaching experience, self-reported beliefs, and practices) with the quality of their classrooms. The data was collected at two Head Start programmes. The sample included 20 classrooms. The sample of teachers was 55% Black, 25% White, and 20% Hispanic. The majority of the teachers had an associate's degree (60%), 20% had a bachelor's or higher, 15% had taken some college courses, and 5% had not taken any college courses. Overall, the teachers were older and experienced teachers. Three instruments including Early Childhood Environmental Rating Scale-Revised (ECERS-R) were used. The findings found that that classroom quality may not be significantly different for teachers with a bachelor's degree compared to those with an associate's degree. Classroom quality did not appear to differ based on the teachers' years of experience in preschool teaching. Taking child development courses seem to be positively related to the quality of the classroom.

Pianta et al. (2005) aimed to detect predictors of classroom quality; they used three ratings of classroom process quality and measured structural quality using the ECERS-R. The findings showed that having a teacher with experience and some level of specialised training in early childhood education within the preschool improved the quality. Thus, teachers with a bachelor's degree were not a sufficient indicator, but having some experience and some specialized training in addition to the bachelor's degree appeared to have effect.

Early et al. (2006) conducted a study to explore association between teachers' education (years of education, highest degree, and those with or without a Bachelor's degree), major, and credentials, with quality. Data was collected from 237 pre-kindergarten classrooms and over 800 children, randomly selected from classroom, by using observation, direct child assessments, and questionnaires. The findings showed that there were few associations between any of the measures of education (years of education, highest degree, and those with or without a Bachelor's degree) and classroom quality or children's outcomes. The credential was linked to children's gains in basic skills. However, education, training, and credentialing were not consistently related to



classroom quality or other academic gains for children.

Sitton (2007) conducted a study to identify the relationship between organisational practices, director's level of education, experience, and child care center programme quality in Tennessee in the USA. The stratified random sample involved 294 child care center directors from 80 urban and rural counties comprising the West, Middle, and a portion of East Tennessee. ECERS was used to assess the quality. The average was 4.55 which represented the quality between minimal and good. The space and furnishing item scored at the highest level, whereas the personal care routines was at the lowest level. A statistically significant relationship was found between the directors' level of education and the specific organisational practices of lead teacher education requirement, lead teacher salary, the number of family involvement opportunities, and the number of staff benefits. A statistically significant relationship was found between director education and Programme Assessment scores (ECERS). However, there was no significance between director experience and scores.

Ying (2009) conducted a study to explore the quality of early childhood programmes in a Chinese socio-cultural context. Ying examined the effects of teachers' years of experience, degree, major, and class size on teachers' perceptions of developmentally appropriate practices, inclusion, and training needs in order to provide services for children with disabilities in regular classrooms. The researcher completed observations in 40 early childhood classrooms using the Early Childhood Environment Rating Scale- Revised (ECERS-R). The results obtained from the classroom observations revealed that the quality of the early childhood learning environment was between minimum and good. Areas that were in need of improvement included materials, time for free play, and provisions for children with disabilities.

More recently, Lawrence (2010) had investigated the impact of teacher education and experience on the quality of classrooms in the Pennsylvania's Keystone STARS programme. The sample included 617 infant or toddler classrooms with 1356 teachers and 887 preschool classrooms with 1915 teachers. The data was used to assess the threshold of teacher experience, education, and programme characteristics that contributed to classroom quality as measured on the Environment Rating Scales (ECERS-R). Results indicated that the level of teacher education and degree major as well as the presence of specialised programme had a significant positive effect on classroom quality. The findings indicated that teacher's years of experience had little impact on classroom quality.

## 6. Instrumentation

With regard to the quality of the preschools, a comprehensive study is required to explore the different variables (space and furnishing, personal care routines, language reasoning, activities, interaction, programme structure, parents and staff). For the purpose of this study, the data was gathered using a questionnaire, namely the ECERS-R (Harms, Clifford, & Cryer, 1998). The data collection was carried out in three ways: firstly, the ECERS-R was used for the respondents to self-report on the quality of their preschool learning environment; secondly, two researchers used the ECERS-R as an observation tool to assess the quality of the learning environment in the preschools; and thirdly, in-depth interviews were conducted with a sub-sample to obtain important data which could not be acquired from observation alone (Gay et al., 2009).

## 7. Population and Sample

This research involved 12 provinces in Jordan. For selecting the sample of this study, each preschool in the population which in total is 1120, (the Ministry of Education 2010) was assigned a number from 1 to 1120. After that, the researcher sorted the assigned numbers into rural preschools and urban preschools, and these were placed, in two different boxes (rural box and urban box). Then the researcher began to select randomly, 250 rural and 250 urban preschools from the respective boxes.. Purposive sampling was used to select the sub-sample for the interviews, as the aim was to examine how the relatively lower quality preschools could be improved. Additionally, 19 preschools were selected purposively to be observed.

## 8. Findings and Discussion

The data from the questionnaire for research question number 1 will be analyzed as follows: What is the current level of the quality of learning environments in government preschools in Jordan in terms of i) space and furnishing, ii) personal care routines, iii) language reasoning, iv) activities, v) interaction, vi) program structure, vii) and parents and staff? To answer this question, a questionnaire in the form of ECERS-R, was conducted to measure the quality of learning environment in government preschools in Jordan. This questionnaire consists of 176 items to be answered using a 7-point Likert scale. The ECERS-R questionnaire consists of seven subscales which are i) space and furnishing, ii) personal care routines, iii) language reasoning, iv) activities, v) interaction, vi) program structure, and vii) parents and staff.

The results of the descriptive analyses showed that the preschools had 'good' levels on five subscales of the quality of the learning environment. Those five subscales are Space and Furnishing ( $M = 3.95$ ,  $S.D. = 0.78$ ), Personal Care Routine ( $M = 4.75$ ,  $S.D. = 0.55$ ), Language Reasoning ( $M = 4.51$ ,  $S.D. = 0.99$ ), Activities

( $M = 4.08$ ,  $S.D. = 0.74$ ) and Parents and Staff ( $M = 4.48$ ,  $S.D. = 0.86$ ). The results also revealed that the other two subscales of the quality of the learning environment in Jordanian government preschools were at 'high' levels. Those two subscales are Interaction ( $M = 5.17$ ,  $S.D. = 0.76$ ) and Program Structure ( $M = 5.18$ ,  $S.D. = 1.05$ ).

Table2. Level of the Preschools in Jordan.

Subscales	Mean	Std. Deviation	Level
Space and Furnishing	3.95	0.78	Good
Personal Care Routine	4.75	0.55	Good
Language Reasoning	4.51	0.99	Good
Activities	4.08	0.74	Good
Interaction	5.17	0.76	High
Program Structure	5.18	1.05	High
Parents and Staff	4.48	0.86	Good

The results of the descriptive analysis yielded that the quality of Interaction and Program Structure are at high levels (see Table 2). It can be inferred that those two subscales demonstrate the strengths of the quality of the learning environment in the government preschool selected. Looking at specific items in these two subscales, it is seen that Staff-child interaction ( $M = 5.28$ ,  $S.D. = 1.28$ ) exhibited the highest mean score, whilst Interaction among children ( $M = 5.09$ ,  $S.D. = 0.75$ ) showed the lowest mean score. Nevertheless, it can be concluded that all four items of Interaction highlight the strength of the learning environment in Jordanian government preschools. The results of items in the Program structure yielded that schedule ( $M = 5.41$ ,  $S.D. = 1.13$ ) yielded the highest mean score, and free play ( $M = 4.84$ ,  $S.D. = 1.28$ ) showed the lowest mean score among all the items of Program Structure which belonged to good status. Still overall we can surmise that overall these can be considered strengths.

The results of the descriptive analysis showed that Space and Furnishing, Personal Care Routines, Language Reasoning, Activities, and Parents and Staff subscales were at a lower level compared to the above two subscales. It can be inferred that these five subscales are the relative weaknesses of the quality of the learning environment in the government preschools with certain items yielding very low level mean scores. For example, Space for privacy ( $M = 2.65$ ,  $S.D. = 1.24$ ) exhibited the lowest mean score which belonged at the low status of the quality of learning environment. The other five items of Space and Furnishing also exhibited mean scores which belonged to the good status of the quality of learning environment. Thus, it can be concluded that all the items of Space and Furnishing can still be improved on. However, the most critical item of Space and Furnishing which needs to be addressed is Space for Privacy.

Meals or snacks ( $M = 4.38$ ,  $S.D. = 0.72$ ) showed the lowest mean score among all the elements of Personal Care Routine. Thus, it can be concluded that only four items of Personal Care Routine need to be looked at. Using language to develop reasoning skills ( $M = 4.19$ ,  $S.D. = 1.20$ ) showed the lowest mean scores among all the elements of Language Reasoning. All the elements of Language Reasoning are considered as weaknesses of the quality of the learning environment as they are all of moderate levels. Art yielded ( $M = 3.37$ ,  $S.D. = 1.32$ ) the lowest mean score among all the elements of Activities. Fine Motor is the lowest score ( $M = 3.64$ ,  $S.D. = 1.29$ ). All the other elements of Activities were found to belong to good level, thus, it can be concluded that all elements of Activities are considered as weaknesses of the quality of the learning environment in Jordanian government preschools.

The supervision and evaluation of staff ( $M = 3.85$ ,  $S.D. = 1.19$ ) exhibited the lowest mean scores among all the elements of parents and staff, while opportunities for professional growth ( $M = 4.57$ ,  $S.D. = 0.87$ ) was the second lowest. It was found that all elements of Parents and Staff belonged to the good level except the provision for parents. Provision for parents ( $M = 5.40$ ,  $S.D. = 1.07$ ) was found to be at high level of the quality of the learning environment. Thus, it can be concluded all the elements of Parents and Staff are weaknesses of the quality of the learning environment in Jordanian government schools except the provision for parents.

### 8.1 Differences in Reality Based on Location and Teaching Experience

The MANOVA results showed that there was no significant difference between rural and urban preschools on the combined dependent variables,  $F(7, 209) = 1.994$ ,  $p = 0.057$ ; Pillai's Trace = 0.063; partial eta squared = 0.063. Because of the non significant result of the multivariate test of significance, it is not useful to investigate further in relation to each of the subscales (Pallant, 2007). As a conclusion, there is no significant difference between the rural and urban preschools on the linear combination of seven subscales of the quality of learning environment which are i) space and furnishing, ii) personal care routines, iii) language reasoning, iv) activities, v) interaction, vi) program structure, vii) and parents and staff.

A one-way between-groups multivariate analysis of variance (MANOVA) was performed to

investigate teaching experience differences in the quality of learning environment. Seven subscales of the quality of the learning environment are treated as seven dependent variables, which are: i) space and furnishing, ii) personal care routines, iii) language reasoning, iv) activities, v) interaction, vi) program structure, vii) and parents and staff. The independent variable was years of teaching experience. The output box labeled Box's Test of Equality of Covariance Matrices indicates whether the data violates the assumption of homogeneity of variance (Pallant, 2007). The result shows that the assumption is violated when the significance value is less than 0.001. Because of the violation of the assumption of homogeneity of variance covariance matrices, Tabachnick and Fidell (2007) recommend the use of Pillai's trace as this test is more robust. The MANOVA result shows that there was a significant difference in the combined dependent variables based on years of teaching experiences,  $F(7, 208) = 1.770$ ,  $p = 0.041$ ; Pillai's trace = 0.112; partial eta squared = 0.056.

### 8.2 Ways of improving quality

Data analysis from interviews revealed that the improvements in the quality of learning environment should take a broad approach, and should include the following: (1) supporting effective and comprehensive professional development of preschool teachers, (2) expand funding, (3) building and resource development to ensure that teachers are prepared to implement high quality services, (4) Review licensing requirements for preschools and consider recommendations to improve quality, (5) connect with families who are keen about the services, appropriate programs, (6) comprehensive, intensive research on the preschool to determine what is needed to improve the quality, (7) Develop strategies for meeting the varied needs of children and families to ensure that they are well-prepared for school, (8) and additional training offerings so that early childhood practitioners become more familiar with quality learning environment.

## 9. Conclusion

This study was found to be very useful as there were no previous systematic assessment done looking at such comprehensive aspects of learning environment quality in Jordanian preschools. The findings of this study has provided suggestions for further improvement, and such efforts must involve not only teachers and service providers, but parents, the government and society at large.

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