

## Prevalence of Behavioral and Emotional Problems among Omani Children as Predicted by Some Demographic Variables

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This study aimed to identify the prevalence of behavioral and emotional problems in children in Oman and demographic variables correlated with these. A random sample of 200 pupils from grades 1-4 in the Governorate of Muscat was selected using the OMBEP measure (Al Said, Birdsey, & Stuart-Hamilton, 2012). Multiple linear regression analysis showed three variables are able to predict emotional and behavioural problems including: the educational level of the father (only when it is below bachelor's degree), the number of hours spent watching T.V., and grade 3 (children in grade 3 are more likely to experience the negative effects of emotional and behavioural problems as compared with children in other grades). However, there are variables that have a positive role in reduction of behavioural and emotional problems. These are: the mother's educational level when it is a bachelor's degree, the existence of a nursemaid, and the effect of having first grade education.

Keywords: prevalence rate, behavioral and emotional problems, Omani children.

### معدلات انتشار المشكلات السلوكية والانفعالية لدى الأطفال العمانيين والتنبؤ بها من خلال بعض المتغيرات الديمغرافية

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هدفت الدراسة إلى التعرف على معدلات انتشار المشكلات السلوكية والانفعالية لدى الأطفال العمانيين، وتحديد المتغيرات الديمغرافية الأكثر قدرة على التنبؤ بها. لتحقيق ذلك تم اختيار عينة عشوائية حجمها (٢٠٠) تلميذا وتلميذة من الصفوف ١ - ٤ في محافظة مسقط. وبعد تطبيق مقياس المشكلات السلوكية والانفعالية الذي أعدته آل سعيد في دراسة سابقة ( Al Said, Birdsey, & Stuart-Hamilton, 2012)، واستخدام التكرارات والنسب المئوية، والانحدار الخطي التدريجي المتعدد كوسائل إحصائية، أشارت نتائج معدلات الانتشار إلى أن مشكلات الانتباه جاءت بالمرتبة الأولى بنسبة (٩٪)، تلتها في ذلك مشكلة العدوان، وجاءت بعد ذلك مشكلتي التمرد والقلق بنفس المستوى، ثم الاكتئاب، وفي المرتبة الأخيرة جاءت المشكلات الاجتماعية بنسبة (٦٪). وأشارت نتائج الانحدار الخطي المتعدد التدريجي إلى إمكانية التنبؤ بالمشكلات السلوكية والانفعالية للأطفال العمانيين من خلال (٤) متغيرات ديمغرافية هي: المستوى التعليمي للأم عندما تكون شهادتها أقل من الدرجة الجامعية، وعدد ساعات مشاهدة التلفزيون، وجنس الطفل عندما تكون أنثى، وعمل الأم عندما تكون متقاعدة. وفي ضوء هذه النتائج تم تقديم عدد من التوصيات والمقترحات.

الكلمات المفتاحية: معدلات الانتشار، المشكلات السلوكية والانفعالية، أطفال عمان.

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For those monitoring and studying the progress of scientific research in the field of behavioral and emotional problems, it can be noted that there is significant interest from researchers throughout the world, (Cox, Cherry, & Orme, 2011; Dekker, Nunn, Einfeld, Tonge, & Koot, 2002; Liljequist & Renk, 2007; Reacorla et al, 2007; Rietveld, Hudziak, Bartels, Beijsterveldt, & Boomsma, 2004), and in Arab countries, in particular (Abdel-Rahim, 1999; Al-Omran & Obadah, 1993; Al-Saratawi, Duqmaq, & Abu Hilal, 2009; Al-Saud, 2007; Al-Shaikh, 2002; Al-Zahrani & Al-Ghamdi, Al-Zahrani, 2004; Kazem & Al Said, 2008; Khulaifi, 1994; Salha, 2007).

This interest in the subject of behavioral and emotional problems is driven by the fact that it is not only continually changing but also open to innovation. This in turn promotes a continuing process of scientific research. It is also a reflection of the various economic, social, psychological, and health aspects experienced by individuals in the various phases of their lives.

Behavioral and emotional problems are discussed by Abu Nahiyah (1993) as one of the main disorders suffered by children, whether in either pre-school, primary school or junior high.

According to Lozano (1997) behavioral and emotional problems of students not only affect classroom performance and the level of academic achievement, but can also appear in the form of a psychological phenomenon which reflects negativity and alienation.

Studies also indicate that the number of pupils who suffer from behavioral disorders has caught the attention of school principals and teachers working in various educational institutions. Most of the efforts of these teachers were directed towards coping with these problems, which made them turn away significantly from the performance of their technical and administrative roles entrusted to them in those institutions. Therefore, paying attention to behaviors of pupils can provide us with tangible evidence of their personal and social conformity (Al-Saratawi et al., 2009).

Many studies, in the Arab context, were conducted in order to monitor and identify the most prominent behavioral and emotional problems suffered by children. For example, a

study by Khulaifi (1994) found that the most visible problems experienced by Qatari children are: lying to others, lack of attention to personal hygiene and the neglect of homework. Another study, by Al-Zahrani et al (2004) indicated that the most visible problems faced by Saudi child are: hyperactivity and restlessness. In another study by Al-Saud (2007) it was noted that most of the problems prevalent in pre-school children are: poor nutrition, stubbornness, depression, and dependability. In the Sultanate of Oman, a survey conducted by Kazem (2007) concluded that the most frequent behavioral problems in children are to quarrel with peers (aggressiveness), health problems such as anemia, tooth decay, and a low level of achievement (or low educational attainment), poor motivation and absenteeism from school.

Most studies indicated that the prevalence of behavioral and emotional problems in children is increasing. For example, with regard to anxiety, the rate of increase at the end of 1980's was 8.8% but this grew to 13% by the mid 1990's. Among children, anxiety prevalence ranged between 2-10%; and in adolescence between 15-20%, and the same with depression and other behavioral and emotional problems (Siu, 2008).

By reviewing research from different countries, the studies differed in the prevalence of behavioral and emotional problems. In the UAE it was 11.8% (Eapen, Swadi, Sabri, & Abou-Saleh, 2001), in Hong Kong, 11.4% (Siu, 2008), in Turkey 11% (Simsek, Erol, Öztop, & Münir, 2007), and in China was 12% in boys and 8.3% in girls (Liu et al., 1999).

Although in previous studies numerous demographic variables but no signal study studied these variables together. For example, a study conducted by Abdel-Rahim (1999) examined the variables of gender, age, level of education of parents and their social status, whereas a study by Mosa and Al-Sabati (1993) addressed variables of gender, age and place of residence. Moreover, Al-Omran and Obadah (1993) studied variables of gender, age, order of birth, age of parents and their educational level, while separate studies by Salha (2007), and Abu Mustafa (2009) examined the impact of age and gender. Finally, the study conducted by Abu Mustafa (2006) focused on the variables of gender and work of the mother.

There are no studies that deal with prevalence rates of behavioral and emotional problems among children in the Sultanate of Oman, so this study fills this gap and identifies the demographic variables that have the ability to predict them. This study focuses on a number of theoretical and applied aspects of behavioral and emotional problems among Omani children:

1. To shed light on the prevalence rate of common behavioral and emotional problems which impede, in one way or another, the appropriate physical, psychological, mental, social growth for children, through identifying them and investigating the extent of their prevalence.
2. To study a large number of demographic variables and to discover, to what extent they are important in predicting a child's problems.
3. The findings of this study will contribute to educating parents, teachers and officials in behavioral problems and their contributing factors and variables. The findings can also have a role in drawing the attention of officials to behavioral problems and methods of reducing them.
4. The results of this study may be useful in constructing an intervention programme that will be designed by the researcher to alleviate behavioral problems, and to develop emotional intelligence.

The current study is based on new principles overlooked in most previous Arab and foreign studies, to the knowledge of the researcher – that addressed predicting behavioral and emotional problems in children through a large number of demographic variables, this study came to fill the shortage in the literature, and to identify demographic variables that can predict behavioral and emotional problems in pupils in grades 1-4 in the Governorate of Muscat, Oman, and that through answering the two following questions:

1. What is the prevalence of behavioral and emotional problems of pupils from grades 1-4 in basic education in the Governorate of Muscat?
2. What demographic variables are most likely to predict the behavioral and emotional problems of pupils from grades 1-

4 in basic education in the Governorate of Muscat?

## METHOD

### Methodology and Variables

The current study used the descriptive analytical method; where the dependent variable is behavioral and emotional problems, and the independent variables are (19) variables: gender, class, age, the order of birth of siblings, the number of brothers, the number of sisters, the educational level of the father, the educational level of the mother, the father's profession, the mother's profession, the monthly income of the family, the presence of domestic help, the number of hours spent by the child with the parents, the place of sleep, the number of hours watching TV, the number of hours of computer use, the number of languages spoken at home, the tendency to talk about school, and finally the desire to go to school.

### Participants

A sample of 200 children from grades 1-4 was randomly selected from six schools in the Governorate of Muscat in the Sultanate of Oman. The data are summarized in Table 1.

**Table 1**  
**The study sample by grade and gender**

| Grade  | Male | Female | Total |
|--------|------|--------|-------|
| First  | 28   | 23     | 51    |
| Second | 14   | 28     | 42    |
| Third  | 20   | 31     | 51    |
| Fourth | 20   | 36     | 56    |
| Total  | 82   | 118    | 200   |

### Instrument (behavioral and emotional problems scale)

In a previous study; the researcher (Al-Said, Birdsey, & Stuart-Hamilton, 2012) developed and codified the behavioral and emotional problems scale which consists of (48) items equally distributed over six dimensions (social problems, attention problems, aggression, rebellious behavior, anxiety and depression). One of the parents completed the scale according to the child's behavior during the past six months choosing one of the three alternatives in front of each item, namely: (Always, Sometimes, Never), which corresponding to (1, 2, 3) respectively. A high score indicates the presence of behavioral and emotional problems in children. The scale focused on a sample of (200) male and female pupils in the Governorate of Muscat - Sultanate of Oman. The validi-

ty of the scale has been verified through raters' opinions and factorial coefficient. As for the reliability; it has been measured by Cronbach's alpha coefficient (the coefficients for the six factors ranged from  $\alpha = .70$  to  $.83$ , while the alpha coefficient for all items of the scale reached  $.93$ ), and test re-test (the re-test coefficient for the six factors ranged between  $.81$  and  $.89$ , while the alpha coefficient for all items of the scale was  $.94$ ). As for the standards; the percentile ranks have been derived as standards for the scale's raw scores.

### Procedure

After obtaining approval from the Ministry of Education through the Technical Office for Studies and Development, the researcher applied a measure behavioral and emotional problems to pupils in grades (1-4) in schools in the Governorate of Muscat. There, she visited the school and obtained a list of the names of pupils, and then placed the scale in an envelope, addressed it to the name of the guardian of the pupil, in coordination with the teacher. She distributed them in the classroom, handing out envelopes to students, and asked them to be delivered to the mother, or father, or guardian. In the second visit, the scale was retrieved from pupils.

The parents/guardians of the pupils were approached via the schools in question. The questionnaire was delivered to the parents via the pupil, with the explicit instruction that participation was strictly voluntary and that non-compliance would not in any way be viewed negatively.

### Data Analysis

Data were entered as a file in the statistical program SPSS. The mean, standard deviations, percentile ranks, percentages, Stepwise Multiple Linear Regression were used. The discrete independent variables were converted to Dummy variables (gender, grade, level of education of the father, and educational level of the mother, father's profession, mother's profession, presence of house help, place of sleep, number of languages at home, talk about school, and finally the desire to go to school); where linear regression analysis (non-logarithmic) requires that all independent variables be continuous, and the use of discrete variables in the regression variables should be converted to dummy variables; to give them quantitative representation (Pedhazur, 1997).

## RESULTS

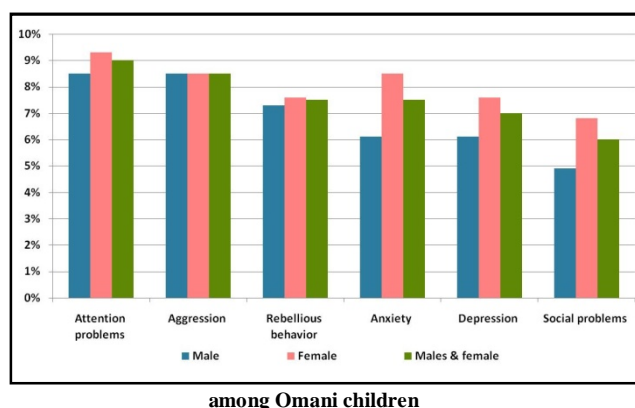
In keeping with tradition and practice, behavior was classified as being a problem if the child's score exceeded the 95th percentile (Al-lam, 2000, p. 106) as this indicates behavior more than two standard deviations away from the norm and thus is highly atypical (Grimm, 1993, p.82). The frequency of 95th percentile scores is given in Table 2 and illustrated in Figure 1.

**Table 2**  
**The prevalence rate of behavioral and emotional problems among Omani children**

| Types of problems   | M     | SD   | Prevalence rates |                |                        |
|---------------------|-------|------|------------------|----------------|------------------------|
|                     |       |      | Male (n=82)      | Female (n=118) | Males & female (n=200) |
| Attention problems  | 13.33 | 2.85 | %8.5             | %9.3           | %9                     |
| Aggression          | 11.51 | 3.14 | %8.5             | %8.5           | %8.5                   |
| Rebellious behavior | 11.58 | 2.60 | %7.3             | %7.6           | %7.5                   |
| Anxiety             | 11.99 | 2.62 | %6.1             | %8.5           | %7.5                   |
| Depression          | 11.59 | 2.37 | %6.1             | %7.6           | %7                     |
| Social problems     | 11.04 | 2.35 | %4.9             | %6.8           | %6                     |

Note: M= Mean, SD= Standard deviation, n= Number of size.

**Figure 1**  
**The prevalence rate of behavioral and emotional problems among Omani children**



The correlational relationship between scores on the behavioral and emotional problems measure and biographical variables was examined using a stepwise multiple regression, with predicted variable the behavioral and emotional problems score and predictor variable the 18 biographical variables [11 discrete variable converted to dummy variables, and 7 continuous variables remained unchanged]. The result is summarized in Table 3.

**Table 3**  
The results of stepwise multiple linear regression and demographic variables that can predict behavioral and emotional problems in children

| # | Independent variables                            | Non standard regression coefficient B | Standard error | Standard regression coefficient Beta | t value | Sig. |
|---|--|---------------------------------------|----------------|--------------------------------------|---------|------|
| 1 | Father's education (less than university degree) | .12                                   | .04            | .22                                  | 2.70    | .01  |
| 2 | Number of hours watching TV                      | .05                                   | .02            | .21                                  | 2.51    | .01  |
| 3 | Female   | -.17                                  | .07            | -.19                                 | -2.29   | .02  |
| 4 | The father's profession (retired)                | .09                                   | .05            | .16                                  | 1.98    | .05  |

Determination coefficient  $R^2 = .15$ ,  $n = 200$ , constant = 1.29, standard error = .06

As may be seen from Table 3, the variance in the regression model is 15%, which is low, and indicates the presence of other factors interfering in the prediction of behavioral and emotional problems in Omani children. It also indicates the ability of four demographic variables to predict behavioral and emotional problems for the children. The variables in descending order are:

1. The educational level of the father when it is below a Bachelor's degree, whereas behavioral and emotional problems increase among children whose fathers' certificates are below a university degree.
2. The total number of hours spent watching TV, are associated with the prevalence rate of behavioral and emotional problems.
3. Children are more likely to face behavioral and emotional problems if their mother education is lower than Bachelor.
4. In the third grade; the behavioral and emotional problems increase among children of third grade more than the other grades in this study; namely first, second and fourth grades.

Regarding behavioral problems, which are aggression, rebellious behavior and attention problems, the analysis in Table 4 shows the ability to predict these problems through four variables; father's educational level, number hours spent watching TV, mother' educational level, and school grade. The variance in the regression model is 16%, which is a low per-

centage and indicates other factors may contribute to predicting behavioral problems among children. The four variables in descending order are:

1. Behavioral and emotional problems increase among children whose fathers' certificates are below a university degree.
2. Behavioral and emotional problems are directly proportional to the number of hours spent watching TV.
3. The educational level of the mother when it is a university degree; there is a negative correlation between mothers' education and behavioral problems. Behavioral and emotional problems among children of those mothers are at a lower level when compared to the educational levels of other mothers.
4. Third grade; the behavioral and emotional problems increase among children of the third grade more than any other grades in this study, that is, first, second and fourth grades.

With regard to emotional problems, such as anxiety, depression and social problems, the analysis in Table 5 illustrates the ability to predict them through three variables; the educational level of the father, the child's school grade and the existence of a nursemaid. The variance in the regression model was 12%, which is a low percentage and indicates that other factors may contribute to predicting the emotional problems among children. The three variables in descending order are:

**Table 4**  
The results of stepwise multiple regression to predict behavioral problems among children by demographic variables

| # | Independent variables                            | Nonstandard regression coefficient B | Standard error | Standard regression coefficient Beta | t value | Sig. |
|---|--|--------------------------------------|----------------|--------------------------------------|---------|------|
| 1 | Father's education (less than university degree) | .12                                  | .05            | .20                                  | 2.42    | .02  |
| 2 | Number of hours spent watching TV                | .06                                  | .02            | .21                                  | 2.58    | .01  |
| 3 | Mother's Education (Bachelor)                    | -.21                                 | .09            | -.20                                 | -2.45   | .02  |
| 4 | Class Three                                      | .13                                  | .06            | .19                                  | 2.26    | .03  |

Determination coefficient  $R^2 = .16$ ,  $n = 200$ , constant = 1.27, standard error = .07

**Table 5**  
**The results of stepwise multiple regression of demographic variables to predict emotional problems in children**

| # | Independent variables                            | Nonstandard regression coefficient B | Standard error | Standard regression coefficient Beta | t value | Sig. |
|---|--|--------------------------------------|----------------|--------------------------------------|---------|------|
| 1 | Father's education (less than university degree) | 0.11                                 | 0.05           | 0.20                                 | 2.47    | 0.02 |
| 2 | Grade One  | -0.15                                | 0.05           | -0.24                                | -2.81   | 0.01 |
| 3 | Housemaid in the house                           | -0.10                                | 0.05           | -0.18                                | -2.15   | 0.03 |

Determination coefficient R<sup>2</sup>= .12, n= 200, constant= 1.51, standard error=.05

1. The educational level of the father when it is below bachelor's degree; emotional problems increase among the children of those fathers.
2. The school grade (it has a negative correlation to emotional problems); where the emotional problems among first grade students are lower than the other grades.
3. The presence of a nursemaid (its correlation to emotional problems is negative); the emotional problems are lower when the children have a special health carers who is trained in childcare.

### DISCUSSION

The result shows that attention problems are, in the first place at a rate of 9%, then the problem of aggression 8.5%, and after that, the problems of rebellious behavior 7.5%, and anxiety at the same level, then depression 7%, and in last place came social problems at 6%. When comparing the results of this question with what the results in the introduction to the study; we find that the prevalence of BEP is low in children in the Sultanate of Oman. It is less prevalent than in children in the United Arab Emirates (Eapen et al., 2001), in Hong Kong (Siu, 2008), in Turkey (Simsek et al., 2007), or in China (Liu et al., 1999).

The results in Table 2 indicate that the prevalence rates are higher among females than among males in five problem areas (attention, rebellious behavior, anxiety, depression, and social problems), and equal in one problem (aggression). This result is consistent with the findings of the study of Salha (2007), and Mosa and Al-Sabati (1993), but differs with the findings of the studies of Abu Mustafa (2006), and Abu Mustafa (2009), and Al-Omran and Obadah (1993), who found high prevalence rates among males. It also differs from the results of a study by Abdel-Rahim (1999), which found no significant differences.

Since the researchers did not find previous studies that predicted BEP through such a

large number of demographic variables, they attempted to repeat this study with researchers, both in the Sultanate of Oman and in other countries (both Arab and non-Arab). In particular, since the bulk of the variance is unexplained in the regression model in the current study, this indicates the need to test other variables, be they demographic, psychological, or social. As already noted, the prevalence rate of behavioral and emotional problems is low in children in the Sultanate of Oman. It is less prevalent than in children in the United Arab Emirates (Eapen et al., 2001), in Hong Kong (Siu, 2008), in Turkey (Simsek et al., 2007), and also in China (Liu et al., 1999).

Regarding the demographic variables that can predict emotional and behavioral problems, three variables have a positive role and another three have a negative role. The negative variables were: the educational level of the father when it is below Bachelor's degree, the total number of hours spent watching TV and being in third grade at school. While the positive variables were: the educational level of the mother when it is a Bachelor's degree, the presence of a housemaid and attending first grade at school. Thus, the demographic variables that have a role in the occurrence of behavioral and emotional problems should be given special attention in teachers' professional development programmes and in educational meetings with parents. This will assist in the provision of proper educational methodology when dealing with children. However, the variables that have a positive role must be given attention also, through employing them in intervention programs, which aim at reducing the behavioral and emotional problems of children. These variables should be taken into account in any intervention programme for children with behavioral problems in Oman.

The interpretation of the negative results of the educational level of the father when it is below the Bachelor's degree, may be attributed to his practices in the upbringing of his children, which varies from educational advice, and

also his lack of understanding of his children's problems. Perhaps, there is also a lack of positive communication channels between him and his children. All the issues mentioned can be reasons for the negative role of this variable. With reference to the number of hours spent watching TV, it is not a new result. Previous studies have confirmed it as does the current study. The developing number of hours spent watching TV leads the child to imitate what he watches from characters in TV programmes. His inability to distinguish between good and bad characters, reflects one way or another on his behavior, and increases the level of problematic behavior (Khulaifi 1994).

On the contrary, the educational level of the father when it is above a Bachelor's degree is positive. There is a positive role played by the educational level of the mother when it is a Bachelor's degree, where she practises good educational and psychological methods in dealing with her children. This has a positive effect in reducing the behavioral and emotional problems of children in the household. In addition, the role of a housemaid was positive and not negative as expected. Perhaps, this is due to the chronological age of children in this study that is not of a very young age group. This means they have the ability to reveal any problem created by the housemaid. On the contrary, infants, or pre-school children; cannot express any exposure to harm from a housemaid (Al-Omran and Obadah, 1993).

### Recommendations

Based on the findings of the study, the researchers recommend the following:

1. Parents and teachers should focus more on attention problems among pupils from grades 1-4.
2. To pay more attention specifically to females in grades 1-4 based on the prevalence of problems where girls showed higher rates than boys.

To compliment the current study, the researchers propose the following:

1. More studies need to be conducted using other demographic and other variables such as cognitive intelligence, emotional intelligence, and personality traits.

2. Study the predictability of behavioral and emotional problems through the health condition of children.

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