



Misbehaviour and educational achievement among Arabic children

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ABSTRACT

Poor levels of behaviour can have deleterious effects on the prospects of children, as well as on fellow students and the ability of teachers to carry out their duties. Relationships between behavioural problems and educational achievement have been identified; however, perceptions of negative behaviours are culturally loaded, and a child's age (school grade) may influence effects since development (or school systems) can lead to variance in behavioural responses. This study set out to measure such relationships across school years in a cultural context (Kuwaiti Arabic) that has received relatively little attention. Participants were children, and their parents and teachers, from primary school grades 4 and 5 and intermediate school grades 6 and 7. Parents/teachers completed an attention-hyperactivity questionnaire, designed specifically for an Arabic setting, and the Strengths and Difficulties Questionnaire, which has been widely used internationally. Children performed measures of literacy and mathematics, scores on which were associated with the questionnaire data. The results showed associations between educational measures and negative behaviours (particularly hyperactivity/inattention and emotion problems) across parent/teacher data, but a potential focus on influences in the primary grades. Findings are discussed in terms of the need for intervention strategies, and similarities with other studies varying in cultural contexts.

Keywords: misbehaviour, educational attainment, cultural context, Kuwait

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INTRODUCTION

The issue of behaviour and problems associated with it has received, and continues to receive, considerable attention and this is particularly true when patterns of misbehaviour are associated with a diagnosed psychological impairment and/or poor educational outcomes. Associations between behaviour and educational achievement have been investigated, with results, while varied, generally consistent with a relationship between measures of educational achievement and negative behaviours that can lead to prolonged off-task activities. In a study concerned with attention deficit hyperactivity disorder (ADHD), for example, McConaughy, Volpe, Gordon, & Eiraldi (2011) found that children diagnosed with ADHD were significantly impaired in five measures of academic performance and in six measures of social behaviour. Similarly, Gutman and Vorhaus (2012) found that ADHD diagnosis is a consistent predictor of low educational achievement in UK primary schools. McEvoy and Welker (2000) concluded from a comprehensive review of the relevant literature that low levels of academic achievement were related to poor levels of behaviour, whereas refraining from misbehaviour, and interventions targeted at reducing misbehaviour, improved educational attainment. A study with 901 British secondary school students as participants set out to investigate associations between negative traits that led to poor behaviour (neuroticism, extraversion and psychoticism) and academic achievement (as measured by national tests) and negative relationships were found between the results of these tests and extraversion and psychoticism (Petrides, Chamorro-Premuzic, Frederickson & Furnham, 2005).

While the focus of this paper is on associations between behaviour and educational achievement within a specific cultural context and in primary and intermediate school grades, it is relevant to consider a wider perspective in terms of the causes and longer term consequences of behavioural problems and their effects both on individuals concerned and on those around them, including peer students and society at large. Giallo and Little (2003) make the salient point that negative effects may not be limited to the individuals in question but also to the learning of children around them, since the efforts of their teachers may be spent on dealing with misbehaviour rather than teaching a lesson.

The consequences for individuals and for the wider society can be seen from studies that have found children with both emotional (internalised) and other behavioural impairments were less likely to complete schooling, were more likely to have lower scores in mathematics and reading, and were also more likely to have been involved in crime and to have required support from mental health services and welfare systems (Groom & Rose, 2004). Such patterns of problem behaviour can be set at an early age and tend to have an impact on learning throughout the school years and onwards to later stages of life. Metsapelto, Pakarinen, Kiuru, Poikkeus and Lerkkanen et al. (2015), for example, found that children with high levels of externalised behaviour (aggression, hyperactivity, inattention etc.) in grades 1 and 2 had lower levels of educational

achievement in later primary school grades. Vitaro, Brendgen, Larose and Tremblay (2005) found that aspects of misbehaviour identified in pupils in their kindergarten years were related to their non-completion of high school.

A further aspect that adds, perhaps, to the complexity of the issue of behaviour is the sometimes unforeseen consequences of diagnosis, particularly when diagnosable disorders exist across a given spectrum. A child that is diagnosed will generally be treated accordingly, either in a special school or within a mainstream environment, will be likely to be provided with appropriate levels of attention from specialists and will learn in a scenario where special measures and levels of tolerance will assist in their learning and may moderate their behavioural patterns. Children who are not diagnosed but who have behavioural issues, whether these stem from being on a spectrum (but not within the diagnosable area of it), or whose propensity to misbehave stems from a potentially wide array of influences, some of which may be interconnected, will be positioned as being 'normal' and will be dealt with and judged by whatever the designated parameters of 'normality' within the social, educational and cultural context in which they are being schooled are.

Thus, the influences on behaviour are manifold and it is relevant to note theories of learning based on self or socially centred constructivism, an important aspect of which is that while numerous groups and agencies will bear upon the learning processes of an individual, particularly in the formative years, the outcome will be determined by how such influences are interpreted. As Bandura (1971, p. 2) suggested, there will be a "continuous reciprocal interaction between behaviour and its controlling conditions." The numerous factors of influence on behaviour are categorised by Otyek (2000) into five general areas and these are individual differences, variant family patterns, impairments and disabilities, environmental and psychological factors. Each of these general areas will be influenced by a range of factors, such as gender, intrinsic intelligence, physical differences and variant patterns of emotions in the case of individual differences.

Accepting that a relationship between behaviour and educational achievement is likely leads to a more detailed discussion of influences on human development, described by Bronfenbrenner (1994, p. 37) as an "ecological system." It suggests multiple truths that exist in seeking to understand how and why people interact in society and the effects that the interactions have on behaviour (Ford & Lerner, 1992). The broadening of approaches in educational psychology led by Bronfenbrenner and others sets out a web of influences, social subsystems ranging from the micro (family, school etc. environments) to the macro (institutions such as the economy, customs, patterns of behaviour etc.). With specific regard to social, emotional and behavioural difficulties (SEBD), Garner, Kaufmann and Elliot (2014) not only place emphasis on social marginalisation but also on approaches to the subject area, which must necessarily "consider the complex interaction of biological, social and psychological factors involved in the etiology of (S) EBD" (Garner et al., 2014, p. 2).

It is clearly important to consider the wide array of influences that will have an impact on behaviour but it can also be contended that, without seeking to adopt a reductionist tone, one which crosses, and even determines, many of the boundaries is culture. In seeking to define culture and the importance of its influence on behaviour, Hofstede (2003) suggests three levels of human mental programming and these are individual, collective and universal. The first (individual) is that which makes people unique; it distinguishes one personality and the behaviours displayed from another. The third (universal) comprises behaviours that are common to all people (laughing, crying etc.). The second (collective) is that which is learned within a cultural context, set at a very young age, but which continues throughout life. It is culture that allows us to know and understand others from a similar background and culture is often a determinant of values, beliefs and attitudes that will have a strong influence on behaviour.

The importance and relevance of culture can be seen in many ways and one is in how teaching and learning takes place and the policies that underpin them. In this regard, Maras and Kutnick (1999) suggest that too little attention is often paid to the social aspects of learning when considering behavioural issues. Hongboontri and Keawkhong (2014, p. 66) emphasise the importance of school cultures, noting that they are “created and recreated” by people, including “teachers, students, communities and parents,” influencing what they “think, feel and do.” The wider cultural context in turn will have a major bearing on the nature and expectations that exist within schools from the perspectives of parents, teachers, students and communities.

Placing such emphasis on culture and cultural contexts provides a necessary prelude to the rationale for this paper and its importance. While some work has been undertaken with regard to behavioural problems and their potential to have an impact on educational achievement, much of it has been within a Eurocentric cultural context while relatively little has been undertaken within a Middle Eastern and Arabic one (although see Alazmi, 2010; Everatt, Al-Sharhan, Al-Azmi, Al-Menaye and Elbeheri, 2011; Everatt, Almurtaji, Al-Sharhan and Elbeheri, 2017). This paper, therefore, seeks to contribute to work in this area by providing further insights into relationships between behavioural problems and academic achievement and by extending the cultural boundaries of that knowledge. It further seeks to do this within a frame that includes measures of behaviour and educational attainment at different levels of progression through the school system. With these aims in mind, the cultural context of Kuwait and the educational system that is positioned within that context forms the following section of this work.

Kuwait cultural context

In economic, demographic and political terms Kuwait can be described as being a rich oil dependent nation with a population of approximately 4 million (of which 69% are foreign nationals), which is highly (98%) urbanised. Its system of government is described as being a constitutional emirate and the wealth of the nation is redistributed in a

number of ways, for example through a comprehensive system of social welfare and free healthcare and education (El-Katiri, Fattouh & Segal, 2011). Although it can be positioned as being an Islamic nation, and this fact clearly has cultural influences, it has unique features that set it aside; indeed, as Salem (2007) suggests, it would be misguided to propose a common Islamic or even Arabic cultural context.

One way of considering Kuwaiti culture is through research that has produced a measure of cultural dimensions for individual nations. This suggests a high score for power distance, which means that people tend to be willing to accept social status and inequalities based on such status. It is highly collectivist, which is suggestive of high levels of extended families and formed social groups, and people tend towards seeking consensus and involvement of others in decision-making (as opposed to confrontation). High levels of uncertainty avoidance are also proposed, which means that people are more comfortable within strict behavioural codes and systems of belief (Hofstede, 2017).

Features of at least some aspects of these cultural dimensions can be seen in descriptions of contemporary Kuwait; Ali and Al-Kazemi, (2007), for example, point out that while there have been many changes as the country evolved in a relatively short period from one that was poor and underdeveloped to its present position, there is a feeling of unease among nationals with changes that have come and intrinsic society continues to be highly stratified and tribal. Although there is a relative lack of research into the culture of Kuwait, it is important to place some emphasis on a belief that societies exist through moral agreements made between groups within them (Bagnoli, 2011) and the impression is of a society and a culture that has made these agreements by retaining a homogeneity that is based on conforming to traditional values, collectivism and tribal values. These values in turn are likely to have influenced the education system and those within it.

The education system of Kuwait

The education system of Kuwait was established in 1954 and has remained largely intact since that time. Structured under the Ministry of Education into districts, kindergarten is optional (ages 4-6), elementary and intermediate school is compulsory (ages 6-10 and 10-14 respectively) while secondary school is also optional (Al-Azemi, 2000). Depending on the grade point average achieved in secondary school, students may be admitted to Kuwait University or one of a number of private institutions, including vocational colleges (Al-Manabri, Al-Sharhan, Elbeheri, Jasem, & Everatt, 2013). Aspects of the curricula are influenced by different sources, with the teaching of Arabic, religion and social studies being strongly guided by Islamic culture and other Middle Eastern countries, while the curricula for mathematics, science and computer studies is based on those of western nations, particularly the UK and the US (Al-Manabri et al., 2013).

Most Kuwaiti teachers are trained at the College of Education in Kuwait University or the

Public Authority for Applied Education and Training. They graduate from four year courses with a bachelor degree as well as a teacher training qualification (Al-Sharaf, 2006). However, some concerns have been raised concerning the quality of teacher training and some of these concerns are centred on the experiences of teachers when they have completed their training and embark on their careers. One indication of this comes from a case study undertaken by Al-Sharaf (2006), who found that a significant number of newly qualified teachers felt humiliated by more experienced staff suggesting that "what they studied in the university is not necessary or suitable for the school's curriculum plans and teaching methods" (Al-Sharaf, 2006, p. 108).

Such a finding perhaps resonates with the cultural dimensions noted above, particularly with regard to power distance and uncertainty avoidance, as well as with a resistance to change and the retention of traditional cultural and even tribal values. Such values with regard to education are emphasised in Ministry of Education guidelines, which promote instructional classroom methods across the age ranges and schools. A typical lesson structure would involve the teacher providing instruction and writing summaries on white boards for students to read and copy down (Al-Sharhan, 2012). Apart from emphasising the continuance of culturally nuanced traditional teaching methods and the cultural traits discussed, this further suggests low tolerance for behaviours that do not conform with anticipations. Such a proposition is supported by Al-Manabri et al. (2013), who emphasise that the school supervisory system seeks to support the maintenance of such practices and that a teacher who might seek to provide support for children with particular needs may be subjected to criticism by supervisors.

Further cultural aspects that have an impact on the education system include the point that social contact between boys and girls is strongly discouraged (and they are therefore taught in separate schools) and by other expectations based in Islamic culture and even tribalism - "parents and tribe provide the external control mechanisms that affect an individual's behavioural choices" (Everatt et al., 2011 p. 128). An important question that this paper seeks to address is whether such important influences may have an impact on any relationship between behaviour and educational achievement in Kuwaiti primary schools.

METHOD

Participants

The education system of Kuwait is divided into six districts and a total of eight schools from the state system were selected from these districts. As has been noted, boys and girls are educated in separate schools in Kuwait, so four of the schools were for girls and four for boys. A demographic analysis of the areas from which they were selected established that the districts and the schools selected within them were typical of Kuwait, containing predominantly Kuwaiti nationals and with no non-typical distribution patterns

of tribal groups. The typicality of the schools was further considered in terms of the results of tests administered for progression through the grades and these were found, in all of the schools, to be consistent with national averages.

The grades chosen for the study were 4 and 5 (primary stage, with children aged 10 to 12) and 6 and 7 (intermediate stage, with children aged 12 to 14). Some guidance from existing literature was consulted in making this choice. In terms of motivation to learn, a range of studies (for example Gottfried, Fleming and Gottfried, 2001) have found that intrinsic motivation begins to decline from Grade 3 and continues to do so through the primary school years (Lepper, Corpus & Iyengar, 2005). Such findings have consistency with a proposition that the minds of children are most explorative in earlier years of development. As this diminishes, other factors become more prominent, based on extrinsic motivation, and differences are likely to become apparent in terms of behaviour and levels of achievement. This is supported by Yuksel (2013), who found that levels of antisocial behaviour increased from Grade 3 onwards and positions grades 4 and 5 as being a period of transition when behavioural patterns become established. In contrast with findings for later years, research conducted in earlier grades suggests that measures of behaviour are "generally insignificant predictors of later academic performance, even among children with relatively high levels of problem behaviour" (Duncan et al., 2007, p. 1428).

A total of 181 children from classes in grades 4, 5, 6 and 7 of the schools selected were the participants (20 males and 22 females from Grade 4; 23 males and 26 females from Grade 5; 18 males and 27 females from Grade 6; 18 males and 27 females from Grade 7 - the differences in numbers of males and females reflected the constituent numbers in each class). Two questionnaires were distributed to their parents and teachers (AHQA and SDQ - see below for details) and these were subsequently completed and returned. All children involved in the study undertook a total of six tests to assess attainment levels in literacy (dictation and comprehension) and mathematics (addition, subtraction, multiplication and division).

Strengths and Difficulties Questionnaire (SDQ)

The strengths and difficulties questionnaire (Goodman, 2001) has been extensively used in studies concerned with assessing behavioural problems with children and adolescents. Such work has been undertaken predominantly within Europe; however, it has been used elsewhere, including in the Middle East (Woerner, Fleitlich-Bilyk, Martinussen, Fletcher, Cucchiario et al., 2004). This international use has led to various language versions of the scale been developed, and provided the current study with an Arabic language SDQ scale. The SDQ has also been shown to have satisfactory levels of validity and reliability across contexts (Elander & Rutter, 1996): reliability (alpha) scores range from 0.59 to 0.73 for the parent sub-scales and from 0.72 to 0.86 for teacher sub-scales (Koskelainen, 2008). A total of 25 items form the SDQ questionnaire and these can be combined to

represent five distinct dimensions: hyperactivity, emotional symptoms, pro-social behaviour, conduct problems and peer problems. Each dimension has five items; for example, hyperactivity includes being restless, constantly fidgeting and being easily distracted in terms of negatively judged behaviour, thinks before acting, and sees tasks through in terms of positively judged behaviour. For the present study all five scales were used in the analyses. Each item was scored 0, 1 or 2 depending on the responses to each of the statements (1 indicative of partial agreement and 2 with full agreement). For each of the five scales, a total score was then generated by summing the scores for the five items that make up that scale (scores thereby ranging from 0 to 10). A high score for the hyperactivity, emotional symptoms, conduct problems and peer problems scales was indicative of more perceived problems by parent or teacher; whereas a high score on the pro-social scale was indicative of positive behaviour.

Attention-hyperactivity questionnaire (AHQA)

The attention-hyperactivity questionnaire has been developed specifically for an Arabic speaking/cultural context (see Al-Sharhan, 2012) and was based on criteria for the diagnosis of Attention Deficit Hyperactivity Disorder (ADHD). These criteria were those included in clinical publications at the time of its development (such as DSM-V from the American Psychiatric Association), and the scale included items consistent with attention/behaviour problems that have been associated with lower learning in educational contexts (Barkley, 2006; Hinshaw, 1994) and which have been used in diagnostic assessments of ADHD within the Arab world (Farah et al., 2009). The questionnaire comprises nine indicators/items for inattention and nine for hyperactivity. A high score in the nine items for inattention would indicate that a child is inattentive to detail, does not pay attention to school work or when playing, appears not to be listening, does not complete assigned tasks, is often forgetful, is disorganised and is easily distracted. A high score for hyperactivity would be indicative that a child is generally restless, a frequent leaver of their seat, is active when it is expected that they would be still, is rowdy during lessons and when playing, talks incessantly and inappropriately, answers quickly without proper thought and is reluctant to turn-take when conversing (often interrupts). Each item in the questionnaire was a statement related to one of these areas of potential problems, followed by a culturally relevant example to explain the concept. Different questionnaires were given to parents and teachers so that different examples could be used to explain concepts (i.e., home versus school examples). Items related to hyperactivity versus attentional problems were totalled separately with higher scores indicating more areas of difficulty related to potential off-task behaviour.

Reading comprehension

This Arabic reading test was developed by the Centre for Children Evaluation and Teaching in Kuwait. The aim of the test was to assess reading comprehension fluency and it has been shown to be related to other measures of reading comprehension in

Arabic and to show good levels of reliability (Elbeheri, Abu Al Diyar, Taibah, Everatt, Mahfoudhi & Haynes, 2013). The test presented the child with 50 incomplete sentences. Each sentence was followed by four words and the child's task was to choose (by circling) the word that completes the sentence in a meaningful/sensible way. Children were given a time limit of 150 seconds to complete as many of the 50 sentences as possible, and the score for the measure was the number of correctly completed sentences.

Spelling to dictation

This measure assessed the children's ability to accurately spell Arabic words (see Elbeheri et al., 2013, for previous work using such an Arabic measure, and for evidence for reliability and correlations with other measures of literacy). The test consisted of a passage of meaningful/connected Arabic text that contained 56 words. Arabic is a cursive script and, therefore, writing in context was seen as more realistic/typical for these grade 4 and 5 children. The passage was read to the students at a relatively slow pace in order that the students could write down what was being dictated, but could also gain necessary context from that passage to add recognition of words: the speed of speech was based on previous pilot work independent of the current data collection. Completed papers on which the students had written the passage were collected and marked for accuracy of spelling. The score for the task was the number of correct spellings out of 56.

Mathematic calculations

Four forms of arithmetic calculations were used for the test of mathematics ability. These involved subtraction, addition, multiplication and division – and have been used in past work on mathematics ability within Kuwaiti children (Everatt, Elbeheri & Al-Manabri, 2012). A total of 36 calculations were developed for subtraction, addition and multiplication, and 33 were set for division. These were presented separately and the children were asked to complete as many as possible within one minute (for subtraction and addition) or two minutes (for multiplication and division). Performance in mathematics was assessed based on the number of calculations completed correctly in the time allocated. These scores were then combined to produce one score.

RESULTS

Descriptive statistics for the measures can be found in Tables 1 (for the educational achievement measures) and 2 (for the behavioural measures). Scores for educational achievement (reading comprehension, spelling to dictation and mathematics calculations) can be found in Table 1, and these show the predicted higher scores for children in grades 6 and 7 (intermediate school) compared to those in grades 4 and 5 (primary school).

Table 1. Average scores (with standard deviations in brackets) for the education measures.

| | Primary school (grade 4 + 5) | Intermediate school (grade 6 + 7) |
|--------------------------|---------------------------------|--------------------------------------|
| Reading comprehension | 20.68 (10.86) | 29.88 (10.22) |
| Spelling to dictation | 39.57 (17.17) | 41.98 (13.69) |
| Mathematics calculations | 53.76 (23.82) | 70.13 (24.64) |

Table 2. Average scores (with standard deviations in brackets) for the behaviour measures

| | Parent questionnaires | | Teacher questionnaires | |
|-----------------------|-----------------------|---------------------|------------------------|---------------------|
| | Primary school | Intermediate school | Primary school | Intermediate school |
| AHQA: inattention | 3.00 (1.96) | 2.98 (2.16) | 3.22 (2.34) | 4.22 (2.63) |
| AHQA: hyperactivity | 3.46 (2.59) | 4.23 (2.56) | 3.24 (2.56) | 3.22 (2.81) |
| SDQ: hyperactivity | 3.96 (2.29) | 3.84 (2.10) | 3.13 (2.28) | 3.69 (2.94) |
| SDQ: emotion problems | 3.18 (2.30) | 3.26 (1.87) | 2.30 (1.93) | 2.33 (2.49) |
| SDQ: conduct problems | 2.25 (1.65) | 2.65 (1.86) | 1.72 (1.65) | 1.62 (2.04) |
| SDQ: peer problems | 3.68 (1.70) | 3.26 (1.59) | 2.69 (1.40) | 3.50 (1.47) |
| SDQ: pro-social* | 7.68 (2.05) | 7.88 (2.04) | 6.57 (2.22) | 6.19 (2.23) |

*A high score for this subscale is reflective of positive behaviour

Table 2 indicates that for the AHQA ratings, parent ratings for AHQA hyperactivity increased considerably from primary to intermediate grades, while those of teachers were virtually identical. In contrast, whereas parent ratings for inattention were similar across primary and intermediate school grades, those of teachers increased by approximately 30%.

For the SDQ measures, hyperactivity showed the highest negative behaviour ratings from both parents and teachers across both primary and intermediate grades (note the pro-social scale is the reverse of the other scales). Similarly, both teachers and parents gave the conduct problems scale the lowest rated scores. Parent ratings were generally higher than those of teachers, including in all categories indicating poor behaviour, with the exception of peer problems at intermediate grades; though, they were also higher for the pro-social scale, which suggests more positive behaviour. In terms of differences between the school groups, intermediate grades were overall rated as showing more behaviour problems than primary grades. These points are considered in more detail in the discussion.

Table 3. Partial correlations controlling for grade and gender (with p-values in brackets) between measures of educational attainment and ratings of behavioural dimensions.

| | Parent responses | | | Teacher responses | | |
|-----------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| | Reading | Spelling | Maths | Reading | Spelling | Maths |
| AHQA: inattention | -.17 (.095) | -.19 (.064) | -.24 (.018) | -.46 (.001) | -.55 (.001) | -.50 (.001) |
| AHQA: hyperactivity | -.11 (.282) | -.09 (.377) | -.16 (.130) | -.02 (.839) | -.11 (.272) | -.12 (.260) |
| SDQ: hyperactivity | -.35 (.001) | -.34 (.001) | -.32 (.001) | -.42 (.001) | -.41 (.001) | -.51 (.001) |
| SDQ: emotion problems | -.25 (.013) | -.18 (.077) | -.27 (.007) | -.34 (.001) | -.33 (.001) | -.33 (.001) |
| SDQ: conduct problems | -.18 (.080) | -.21 (.037) | -.22 (.029) | -.11 (.279) | -.23 (.024) | -.31 (.002) |
| SDQ: peer problems | -.13 (.219) | .00 (.999) | -.17 (.089) | -.30 (.003) | -.27 (.007) | -.27 (.009) |
| SDQ: pro-social | .17 (.101) | .04 (.709) | .11 (.302) | .26 (.011) | .32 (.001) | .26 (.012) |

Note: figures in bold are significant at the .05 alpha level

The main aim of the paper, though, was to consider relationships between measures of behaviour and educational attainment. Table 3 presents the results of partial correlations (controlled for grade and gender) between the dimensions of behaviour and educational achievement test results.

It is noteworthy that a significant relationship was found between all measures of educational achievement and the behavioural ratings of both parents and teachers for SDQ hyperactivity and between conduct and spelling and mathematics (both parents and teachers). On the other hand, while there was significance between teacher ratings of inattention and all educational measures, this was only so with regard to mathematics for the parent ratings. Teacher ratings, furthermore, indicate significance with emotional and peer problems and the pro-social scale, while those for parents do not. Possible reasons for such differences are discussed in more detail in the following section.

Table 4. Partial correlations controlling for grade and gender (with p-values in brackets) between measures of educational attainment and parents ratings of behavioural dimensions

| | Primary grades | | | Intermediate grades | | |
|-----------------------|------------------------------|------------------------------|----------------|---------------------|------------------------------|------------------------------|
| | Reading | Spelling | Maths | Reading | Spelling | Maths |
| AHQA: inattention | -.15 (.266) | -.14 (.313) | -.09 (.527) | -.11 (.488) | -.16 (.304) | -.29 (.067) |
| AHQA: hyperactivity | .06 (.657) | .09 (.538) | .15 (.289) | -.21 (.188) | -.20 (.219) | -.33 (.034) |
| SDQ: hyperactivity | -.34 (.013) | -.27 (.045) | -.17 (.228) | -.30 (.055) | -.39 (.011) | -.43 (.005) |
| SDQ: emotion problems | -.23 (.094) | -.20 (.156) | -.20 (.146) | -.27 (.092) | -.16 (.328) | -.40 (.009) |
| SDQ: conduct problems | -.11 (.445) | -.14 (.320) | -.09 (.536) | -.16 (.308) | -.29 (.065) | -.28 (.072) |
| SDQ: peer problems | -.23 (.098) | -.08 (.557) | -.11 (.449) | -.02 (.908) | .11 (.481) | -.31 (.046) |
| SDQ: pro-social | .05 (.707) | -.09 (.504) | -.11 (.411) | .30 (.059) | .19 (.228) | .30 (.054) |

Note: figures in bold are significant at the .05 alpha level

Table 3 combines data for both primary and intermediate level students, while one aim of this paper was to consider differences between these two levels. Therefore, Tables 4 and 5 present partial correlations separately for these levels: Table 4 for parent responses and Table 5 for teacher responses.

Consistent with Table 3, more areas of significant relationships were identified with the teacher ratings than for the parent responses. For parents, again SDQ hyperactivity seems to be the factor most related to the children's scores on literacy and mathematics. This seems to be the case across primary and intermediate grades. However, there is also a trend for medium level relationships between different behavioural ratings and mathematics scores in the intermediate grades data (particularly, AHAQ hyperactivity, and SDQ emotional and peer problems). For the teachers, splitting between primary and intermediate grades indicates that, generally, larger correlations between educational

Table 5. Partial correlations controlling for grade and gender (with p-values in brackets) between measures of educational attainment and teachers ratings of behavioural dimensions

| | Primary grades | | | Intermediate grades | | |
|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|-----------------------|
| | Reading | Spelling | Maths | Reading | Spelling | Maths |
| AHQA: inattention | -.58 (.001) | -.67 (.001) | -.63 (.001) | -.29 (.071) | -.30 (.051) | -.36 (.017) |
| AHQA: hyperactivity | .09 (.538) | -.13 (.349) | .06 (.698) | -.08 (.627) | -.04 (.807) | -.20 (.189) |
| SDQ: hyperactivity | -.53 (.001) | -.50 (.001) | -.60 (.001) | -.26 (.106) | -.26 (.104) | -.44 (.005) |
| SDQ: emotion problems | -.40 (.003) | -.25 (.070) | -.33 (.016) | -.25 (.124) | -.38 (.017) | -.30 (.057) |
| SDQ: conduct problems | -.18 (.205) | -.28 (.047) | -.30 (.033) | -.01 (.955) | -.10 (.531) | -.29 (.069) |
| SDQ: peer problems | -.18 (.213) | -.11 (.441) | -.07 (.610) | -.28 (.077) | -.31 (.055) | -.33 (.036) |
| SDQ: pro-social | .36 (.009) | .48 (.001) | .34 (.013) | .22 (.168) | .18 (.276) | .31 (.050) |

Note: figures in bold are significant at the .05 alpha level

measures and behavioural ratings were evident in the responses of primary teachers and their children – this is most obvious in the large correlations between the educational measures and AHAQ inattention and SDQ hyperactivity. Though, as with the parent data, there is also a trend for medium level correlations to be found with the teacher's behavioural rating and the children's mathematics scores in the intermediate grades.

DISCUSSION

The main finding from the current study is the evidence for associations between measures of reading, spelling and mathematics and rated levels of behaviour-related difficulties within this relatively understudied cultural context of Kuwait. The data also argue for associations across environments in Kuwait (i.e., home and school), particularly in terms of hyperactivity levels; although there are differences between ratings of parents versus teachers. The ratings of parents were generally higher than those of teachers, including for the Pro-Social scale, which indicates positive behaviours. One potential reason for this is that teachers have the advantage of being able to make comparisons between children within a much wider group of children than is possible for parents. Therefore, parents may have more concerns about behavioural problems through a somewhat different (possibly less nuanced) view than teachers, and to have a more directed and personal perspective on an individual child rather than within a wider group setting (Maras & Kutnick, 1999): for example, peer problems can be judged from a much wider group perspective by teachers compared to parents. Equally, the priorities and judgements of teachers (as opposed to those of parents) will be based on behaviour within an educational setting (see also Mooij & Smeets, 2009), which will be influenced by cultural norms and traditional educational practices. In a Kuwaiti cultural context these may be based on expectations of conforming behaviour and instructional learning. Behavioural expectations will be different across the two environments (school and home) and children will surely recognise this and respond accordingly (see Gutman & Vorhaus, 2012). Therefore, reports from both parents and teachers should be seen as important in defining the wellbeing of children (Fauth & Thompson, 2009).

A main aim of the study was to consider relationships between behaviour and academic achievement in Arabic (Kuwaiti) children. The findings suggest relationships between literacy and mathematics levels and some specific areas of behaviour reported by both parents and teachers (i.e., hyperactivity, emotional problems and conduct as measured on the SDQ scale). Recognition of these issues and the difficulties faced by children in terms of their learning has been noted previously by researchers: see, for example, Barkley (2006) on issues related to hyperactivity, and Walker, Robinson, Adermann and Campbell (2014) on the well-established negative impact emotional problems have on educational attainment. The current data, therefore, suggest that negative impacts of off-task behaviours and negative emotional reactions may impact on learning within the current research context (the Arabic cultural context of Kuwait) as much as it does in

other cultural contexts and different educational systems. Research identifying ways to reduce such negative influences, therefore, would seem to be useful across these different contexts.

The present study shows such academic achievement and negative behaviour relationships in a relatively under-researched cultural context, and it is useful to contrast the findings across such contexts. A UK study by Lindsay and Dockrell (2000) considered the relationship between behavioural traits as measured by parent and teacher SDQ and educational attainment for a group of students aged 7 to 8 years. The dimension that was given the highest mean score by both groups of raters was hyperactivity, and conduct problems the lowest, with emotion and peer problems falling between; findings similar to those in the current study. Hayes (2007), in a study conducted in Australia, identified hyperactivity as gaining the highest rank on the SDQ scales, with conduct been given the lowest, and emotion and peer problems in-between. Studies conducted by Niclasen et al. (2012) in Denmark with children aged 10-12, and on 7th Grade Finnish children by Koskelainen (2008), showed the same pattern: hyperactivity given the highest scores, conduct problems the lowest, emotion and peer problems in-between. These studies showed similar patterns of rated difficulties on the SDQ as the current study. Although this pattern is not always found: a study by Horiuchi et al. (2014) looked at parent rated SDQ measures for Japanese control children aged 10 to 12 and found that conduct problems produced the second highest scores after hyperactivity.

A further aim of the study was to consider differences in terms of relationships between education measures and the behaviour of children at primary versus intermediate levels. The main finding here was that the late primary years seem to be a potential focus of concern in terms of relationships between negative behaviours and educational achievement: the large relationships between the teacher ratings of inattention and hyperactivity are particularly note-worthy, though medium effect sizes for emotional problems should also be considered in future research. Therefore, at least for the current educational context, this late primary period may be an important period within which to target interventions aimed at reducing negative influences of behavioural problems. However, there may also be an influence at intermediate grade levels of behavioural problems and mathematics ability. This specific focus is worthy of further research but may be consistent with the perceived complexity of mathematics (see Chinn, 2015) paired with the need to pass formal assessments of mathematics in order to progress to high-value high-school/college courses. However, further research contrasting larger groups of students across a wider range of grades would also be useful in order to identify specific points of association between educational skills and negative emotional-behaviour factors; for example, assessing younger grades in primary schools as well as higher grades in post-primary education school contexts to determine if the focus of the effects are at a particular developmental stage within Arabic students, or if they are more associated with important educational transition points (e.g., from primary to secondary and from secondary to post-secondary). Such extended data collection is

ongoing in Kuwait and has increased the number of schools involved so as to reduce the potential impact of one teacher view on the findings: a larger number of teachers will lead to less effect of individual differences in ratings.

CONCLUSIONS

A number of points, related to its aims, can be made in conclusion of this work. One is that relationships are likely to exist between some dimensions of behaviour and educational achievement in Arabic (Kuwaiti) children, particularly in the areas of hyperactivity, inattention and emotional symptoms. Variations in such relationships due to cultural context are difficult to assess, but the similarities in findings for the SDQ scale between this and other studies suggests some level of consistency across contexts. However, further research that focuses on the relationship between behavioural problems and academic achievement across different cultural contexts would be worthwhile. Finally, the current data argue for important differences in the relationship between behaviour and academic attainment as children mature and progress through school. The results of this study argue that additional work in the late primary grades (at least within the current educational context) would be justified, along with research that considers influences on specific educational areas (such as mathematics) in later grades.

REFERENCES

- Alazmi, Y. (2010). Relationships between academic achievement, emotion and self-concept amongst Arabic children. MPhil thesis, University of Surrey.
- Al-Azemi, F. K. (2000). The Islamic education curriculum in Kuwait secondary schools. Doctoral thesis, University of Sheffield.
- Ali, A. J., & Al-Kazemi, A. A. (2007). Islamic work ethic in Kuwait. *Cross-Cultural Management: An International Journal*, 14(2), 93-104.
- Al-Manabri, M., Al-Sharhan, A., Elbeheri, Jasem, I. M., & Everatt, J. (2013). Supporting teachers in inclusive practices: Collaboration between special and mainstream schools in Kuwait. Preventing School Failure: *Alternative Education for Children and Youth*, 57(3), 130-134.
- Al-Sharaf, A. (2006). New perspectives on teacher education in Kuwait. *Journal of Education for Teaching: International Research and Pedagogy*, 32(1), 105-109.
- Al-Sharhan, A. A. (2012). Efficacy of interventions aimed at reducing behavioural and educational difficulties amongst Kuwaiti students. PhD thesis, University of Surrey.
- Bagnoli, C. (2011). Constructivism in Metaethics. In E. N. Zalta (Ed.), *The Stanford Encyclopaedia of Philosophy*. Retrieved from: <https://stanford.library.sydney.edu.au/archives/fall2012/entries/constructivism-metaethics/>
- Bandura, A. (1971). *Social Learning Theory*. New York: General Learning Press.
- Barkley, R. A. (2006). *Attention Deficit Hyperactivity Disorder: A Handbook of Diagnosis and Treatment, 3rd Edition*. New York: Guilford.
- Bronfenbrenner, A. (1994). Ecological models of child development. In the *International Encyclopaedia of Education, 2nd Ed*. Oxford: Elsevier.
- Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P., Pagani, L. S., Feinstein, L., Engel, M., Brooks-Gunn, J., Sexton, H., Duckworth, K., & Japel, C. (2007).

- School readiness and later achievement. *Developmental Psychology*, 43(6), 1428-1446.
- Elander, J., & Rutter, M. (1996). Use and development of the Rutter Parents' and Teachers' Scales. *International Journal of Methods in Psychiatric Research*, 6(2), 63-78.
- Elbeheri, G., Abu Al Diyar, M., Taibah, N., Everatt, J., Mahfoudhi, A., & Haynes, C. (2013). *A test of reading & spelling for children* (in Arabic). Kuwait: Centre for Child Evaluation & Teaching.
- El-Katiri, L., Fattouh, B., & Segal, P. (2011). *Anatomy of an oil-based welfare state: Rent distribution in Kuwait*. Research Paper, Kuwait Programme on Development, Governance and Globalisation in the Gulf States.
- Everatt, J., Al-Sharhan, A., Al-Azmi, Y., Al-Menaye, N. & Elbeheri, G. (2011). Behavioural/attentional problems and literacy learning difficulties in children from non-English language/cultural backgrounds. *Support for Learning*, 26(3), 127-133.
- Everatt, J., Almuttaji, Y., Al-Sharhan, A., & Elbeheri, G. (2017). Relationships between emotion and educational achievement in Arabic children. *Asian Pacific Journal of Developmental Differences*, 4(1), 65-84.
- Ford, D. H., & Lerner, R. M. (1992). *Development Systems Theory: An integrated approach*. Newbury Park, CA: Sage.
- Fauth, B., & Thompson, M. (2009). Young children's well-being. London: NCB Research Centre, National Children's Bureau.
- Hayes, L. (2007). Problem behaviours in early primary school children: Australian normative data using the Strengths and Difficulties Questionnaire. *Australian and New Zealand Journal of Psychiatry*, 41(3), 231-238.
- Garner, P., Kaufmann, J., & Elliot, J. (Eds.), (2014). *The Sage handbook of Emotional and Behavioural Difficulties* (2nd Edition). London: Sage Publication.
- Giallo, R., & Little, E. (2003). Classroom behaviour problems: The Relationship between preparedness, classroom experiences, and self-efficacy in graduate and student teachers. *Australian Journal of Educational & Developmental Psychology*, 3, 21-34.
- Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40(11), 1337-1345.
- Gottfried, A. E., Fleming, J. S., & Gottfried, A. W. (2001). Continuity of academic intrinsic motivation from childhood through late adolescence: A longitudinal study. *Journal of Educational Psychology*, 93(1), 3-13.
- Groom, B., & Rose, R. (2004). Involving students with emotional and behavioural difficulties in their own learning: A transnational perspective. In P., Garner, F., Yuen, & P., Clough, (Eds.), *Handbook of Emotional and Behavioural Difficulties*. London: Sage.
- Gutman, L. M., & Vorhaus, J. (2012). The impact of pupil behaviour and wellbeing on educational outcomes. The Childhood Wellbeing Research Centre, UK Department for Education Research Report DFE-RR253.
- Hofstede, G. (2003). *Culture's consequences: Comparing values, behaviours, institutions and organisations across nations*. Thousand Oaks, CA: Sage.
- Hofstede, G. (2017). *What about Kuwait*. Last retrieved October 2017 from <https://www.hofstede-insights.com/country-comparison/kuwait/>
- Hongboontri, C. & Keawkhong, N. (2014). School culture: Teachers' beliefs, behaviours, and instructional practices. *Australian Journal of Teacher Education*, 39(5), 66-88.
- Horiuchi, F., Oka, Y., Uno, H., Kawabe, K., Okada, F., Saito, I., Tanigawa, T., & Ueno, S. (2014). Age- and sex-related emotional and behavioural problems in children with autism spectrum disorders: Comparison with control children. *Psychiatry and Clinical Neurosciences*, 68(7), 542-550.

- Koskelainen, M. (2008). *The Strengths and Difficulties Questionnaire among Finnish school-aged children*. Department of Child Psychiatry, University of Turku, Finland.
- Lepper, M. R., Corpus, J. H., & Iyengar, S. S. (2005). Intrinsic and extrinsic motivational orientations in the classroom: Age differences and academic correlates. *Journal of Educational Psychology, 97*(2), 184-96.
- Lindsay, G. & Dockrell, J. (2000). The behaviour and self-esteem of children with specific speech and language difficulties. *British Journal of Educational Psychology, 70*(4), 583-601.
- Maras, P., & Kutnick, P. (1999). Emotional and Behavioural Difficulties in schools: Consideration of relationships between theory and practice. *Social Psychology of Education, 3*(3), 135-153.
- McEvoy, A., & Welker, R. (2000). Antisocial behaviour, academic failure, and school climate: A critical review. *Journal of Emotional and Behavioural Disorders, 8*(3), 130-140.
- McConaughy, S. H., Volpe, R. J., Antshel, K. M., Gordon, M., & Eiraldi, R. B. (2011). Academic and social impairments of elementary school children with Attention Deficit Hyperactivity Disorder. *School Psychology Review, 42*(2), 200-225.
- Mooij, T., & Smeets, E. (2009). Towards systemic support of pupils with emotional and behavioural disorders. *International Journal of Inclusive Education, 13*(6), 597-616.
- Niclasen, J., Teasdale, T. W., Andersen, A. N., Stovgaard, A. M., Elberling, H., & Obel, C. (2012). Psychometric properties of the Danish Strength and Difficulties Questionnaire: The SDQ assessed for more than 70,000 raters in four different cohorts. *PLoS One, 7*(2). doi:10.1371/journal.pone.0032025
- Otyek, M. C. (2000). *Behaviour Modification*. UNESCO Regional Training Seminar on Guidance and Counselling, France: UNESCO.
- Petrides, K., Chamorro-Premuzic, T., Frederickson, N., & Furnham, A. (2005). Explaining individual differences in scholastic behaviour and achievement. *British Journal of Educational Psychology, 75*(2), 239-255.
- Salem, P. (2007). *Kuwait: Politics in a participatory emirate*. Carnegie Endowment for International Peace, Working Paper 3/2007.
- Vitaro, F., Brendgen, S., Larose, M., & Tremblay, R. E. (2005). Kindergarten disruptive behaviours, protective factors, and educational achievement by early adulthood. *Journal of Educational Psychology, 97*(4), 617-629.
- Walker, R., Robinson, M., Adermann, J., & Campbell, M. A. (2014). Working with behavioural and emotional problems in young people. In P., Dudgeon, H., Milroy, & R., Walker, (Eds.), *Working together: Aboriginal and Torres Strait Islander mental and health and wellbeing principles and practice* (2nd Edition). Canberra: Department of The Prime Minister and Cabinet.
- Woerner, W., Fleitlich-Bilyk, B., Martinussen, R., Fletcher, J., Cucchiaro, G., Dalgalarondo, P., Lui, M., & Tannock, R. (2004). The strengths and difficulties questionnaire overseas: Evaluations and applications of the SDQ beyond Europe. *European Child and Adolescent Psychiatry, 13* (Sup2), ii47-ii54.
- Yuksel, M. Y. (2013). An investigation of social behaviours of primary school children in terms of their grade, learning disability and intelligence potential. *Educational Sciences: Theory & Practice, 13*(2), 781-793.