



Child Well-Being in Qatar*

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The views, opinions and interpretations of data expressed in this publication are those of the Project Team and not necessarily those of the General Secretariat for Development Planning.

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Executive Summary

Child Well-being

Child well-being provides an approach to policy that looks across childhood to ensure that the crucial aspects of child development are considered alongside the more general concerns about children as a potentially vulnerable sub-group of society. A holistic childhood-based view of well-being can bring crucial aspects of policy together and co-ordinate a range of government programmes in order to optimise child-wellbeing and, in doing so, promote and sustain better human capital outcomes.

The fundamental point of examining well-being over the whole of childhood reflects the argument that child development builds on key initial investments, and that a process of policy intervention based on education alone is not optimal for Qatar if early investments across a range of sectors are not incorporated.

The key findings and recommendations of this report are as follows:

Policy Reform - At the strategic level a clear and consistent series of incremental reforms should be put in place to adjust the overall policy balance towards the developmental and longer-term needs of today's youngest child cohort. Policy reassessment is also required in family policy. This needs to be carefully approached as the family is seen as a private sphere where public policy should intervene only where necessary. Nevertheless, policy should aim to improve family health and learning environments. The third area of policy reform should promote such family-based policy through a systemic change in the current set of social subsidies for families. These are mostly the wage subsidies for housing and family allowances and other payments made to Qatari government employees.

Evidence Base - A systematic evidence review of a wide range of health, education, familial, attitudinal and other data needs to be undertaken to build a profile of the perceived elements of child well-being; to profile risks, and develop policy needs and eventual evaluation databases. The aim is to identify gaps and to assess how far existing data collection approaches in the Supreme Council for Family Affairs, The Supreme Education Council, Qatar Statistics Authority, the Permanent Population Committee, Hamad Medical Corporation and other stakeholders are covering the ground, duplicating or missing important elements of child well-being.

New survey data needs to be commissioned focused on a strategic approach to child well-being. This means that both cross-sectional data needs and longitudinal profiling should be uppermost in mind.

Qatar needs to commit to identify contextually appropriate measures of child-wellbeing based on a full audit of data sources and expenditure profiles to establish what is duplicable on the OECD measure of well-being. Qatar-specific measures of child well-being need to be considered and elucidated with the aim of developing a full set of Qatar-relevant indicators and potentially the adoption of EU or UNICEF approaches that may require new survey data to collect profiles of subjective well-being. The database being developed by the Supreme Council for Family Affairs should be considered as the optimal place to develop new and comprehensive child-wellbeing indicators.

Further Research - Resources available for this report have not allowed a deep analysis of child poverty. It is therefore recommended that research investment is made to analyse child poverty and its association with family composition, income sources in the household, and risk factors such as child and adult disability, and the non-employment of adults and parents. Maternal income and wider gender issues that reflect the reduced opportunities for Qatari women to have non-employment income (from investment, sponsorship of migrants and in silent partner status in foreign business) should also be subject to thorough research.

It is further recommended that future calculations of divorce rates reflect an estimate of the annual stock of marriages based on those existing in the 2004 Census, annually updated for cumulative changes from inflows (new marriage) and outflows (deaths and divorces) to replace the current specified population-based denominator figures used by QSA. Additionally, the adoption of supplementary measures based on new marriages to calculate attrition rates of divorce over time are more likely to identify changing trends in new marriages. Better longitudinal profiling of all marriages is required so that pre-determinant factors as well as factors within marriage can be better understood in divorce causation. A final specific research recommendation is to address the prevalence of re-marriage post-divorce and its determinants.

A detailed and analytically robust analysis of the effects of divorce and living in single parent families should be undertaken in Qatar so that the role of employment, state benefits and child maintenance payments can be specifically reviewed to assess how far income shocks and other detrimental effects of divorce on children can be mitigated in the future.

Research also needs to be conducted into family effects on educational performance and on general social and cognitive well-being, and a general integration of family-based and formal education inputs into measuring educational outcomes and performance.

The Qatar National Vision 2030 clearly sets out the broad policy aims and a short- to medium-term strategic plan to re-orientate current policy programmes towards such aims. This report suggests strongly that this needs to concentrate on the early years of childhood to develop different integrated programmes to promote healthy optimal child development in infancy, using a combination of parental and familial based interventions backed up by services based in primary healthcare and social facilities. There is only one generation of children to influence more positively before Qatar has to live according to its 2030 vision of itself.

Today's policy makers, today's government employees and today's parents are all part of tomorrow's vision and have the opportunity and responsibility to change and understand how the costs and consequences of these changes will benefit the next generation in time for 2030.

1. Child-Well-being

The concept of well-being has grown in response to research that shows that measures of material deprivation alone do not adequately capture the multi-dimensional nature of socio-economic disparities within populations. Income and expenditure, the main elements used to capture poverty, do not capture essential elements of human capital and potential such as education and skills, or health and capabilities. Well-being as a composite measure that includes quality of life as well as resources and issues relating to subjective well-being have also grown in prominence as measures such as 'happiness' have been found not to increase as income continues to rise far above levels of basic needs satisfaction. Many with high incomes are often reported to have low subjective well-being¹.

Child well-being is perhaps the clearest and most justifiable example of this approach. Children cannot simply be considered a sub-group of the population because they have clear developmental needs in order to become fully realised and productive adults. The revolution in approaches to considering children come from evidence from longitudinal surveys that follow childhood as a developmental process. Such studies show that the general circumstances of childhood have consequential large effects on adult outcomes. In addition, such studies show the effect of specific risk events such as income poverty, divorce and separation, maternal ill-health, and disability and illness, for example.

As a result 'child well-being' is a concept that is

- a) **multi-dimensional**, and includes both material and subjective elements
- b) **dynamic**, and so considers changes over time and how crucial elements of well-being depend on a developmental process that requires cumulative necessary steps in cognitive and emotional development
- c) **relational**, and so considers causal pathways from other people (parents and peers, for instance) and the distributional consequences of different levels of well-being across the population.

There is no single agreed concept of child well-being. Current approaches to child well-being exist at both national and international levels. National profiles of child-wellbeing have been developed in high income countries such as Australia (Australian Institute of Health and Welfare 2009)², the USA (Forum on Child Statistics 2009)³, the UK (Bradshaw et al 2006)⁴ and others, and are specific to a range of measures developed for each country. In addition, international profiles and comparisons of levels of child-well-being have been developed both by particular research and academic institutes (for instance, The Foundation for Child Development (2007)⁵) and by three international

¹ See Clark A., Frijters P and Shields M (2008) Relative Income, Happiness, and Utility: An Explanation for the Easterlin Paradox and Other Puzzles, *Journal of Economic Literature*, Vol 46, (1), 95-144 for a recent discussion of theory and evidence.

² Australian Institute of Health and Welfare (2009) *A picture of Australia's children 2009*, Canberra: AIHW

³ The Forum on Child Statistics (2009) *America's Children: Key National Indicators of Well-Being, 2009*. Washington DC, Federal Interagency Forum on Child Statistics.

⁴ Bradshaw J (ed) (2006) *The Well-Being of Children in the UK*, London: Save the Children Foundation

⁵ The Foundation for Child Development (2007) *Special Focus Report on International Comparisons*

agencies: UNICEF, OECD and the European Union. International profiles of child well-being are based on indices made up of an agreed set of domains that can be consistently captured across international survey data.

UNICEF's approach for high income countries illustrates the development of such comparative measures of child well-being.⁶ Five dimensions of well-being are established using a range of measures from comparable data:

- **material deprivation** - uses a relative poverty line (50% of median household income), the % of children in homes with no employed adult, together with child-level data on perceived low family affluence, educational resources and a stock of less than 10 books in the home
- **health and safety** - uses data on infant mortality, coverage of immunisation and the prevalence of deaths from accidents and injury for children
- **educational well-being** - uses data from PISA school performance scores, rates of post-15-19 year olds staying in education and those neither in education, training nor employment, and self-reported expectations of low-waged employment by 15 year olds
- **family and peer relationships** - uses data on the proportion of children in single parent and step-parent families, the proportion of children reporting eating the main meal of the day with their parent(s), and the time parents invest in talking to the children together with the responses from young teenagers who report their peers to be kind and helpful.
- **behaviours and risks** - uses survey data on the % of children who eat breakfast, eat fruit daily, and/or overweight, together with teenage risk behaviour on sexual activity, smoking, drug and alcohol consumption and measures of experienced violent behaviour and bullying.
- **subjective well-being** - uses responses from older children who rate their health 'fair' or 'poor', who like school a lot, who rate themselves above mid-point on a 'life-satisfaction scale' and who report their personal well-being as negative.

These descriptions of the measures used give a clear idea of how wide and comprehensive the measurement of well-being attempts are. The resulting index allows countries to be ranked in terms of their overall scores.

The EU approach⁷ is very similar, while the OECD approach solely employs objective measures: material well-being, housing and environment, educational well-being, health and safety, risk behaviours and quality of school life⁸

These aggregate measures of child well-being rely purely on cross-sectional data that are brought together into indices. While some measures capture different stages of childhood – infant mortality

The Foundation for Child Development Child and Youth Well-Being Index (CWI) Project, Durham NC: CWI Duke University.

⁶ See UNICEF (2007) *Child poverty in perspective: An overview of child well-being in rich countries*, Florence: UNICEF Innocenti Research Centre

⁷ European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities (2008) *Child Poverty and Well-Being in the EU: Current status and way forward*, Luxembourg: Office for Official Publications of the European Communities

⁸ OECD (2009) *Doing Better for Children*, Paris: OECD

and teenage smoking for instance - the whole approach is unable to properly capture the process of childhood and thus the critically important developmental process that underlies it. However, because the measures bring together specific direct measurements of children's circumstances they are a large improvement on simpler measures such as child poverty, which treats children as a sub-group of the population. Additionally, the approach of OECD, EU and UNICEF has primarily been based on identifiable risk factors rather than on positive outcomes. A better balance in the measurement of child well-being in order to produce and integrate additional 'positive indicators is being currently developed⁹.

A first recommendation of this report is that Qatar commits to producing measures of child-wellbeing.

- **A full audit of data sources and expenditure profiles should be undertaken to establish what is duplicable on the OECD measure of well-being.**
- **Particular Qatar-relevant measures of child well-being should also be considered and elucidated.**
- **Consideration of further data requirements to measure, both to develop a full set of Qatar-relevant indicators and potentially the adoption of EU or UNICEF approaches that require new survey data to collect profiles of subjective well-being.**
- **The database being developed by the Supreme Council for Family Affairs¹⁰ should be considered as the optimal place to develop new and comprehensive child-wellbeing indicators.**

However, given Qatar's ambitions for human and social development contained in the Qatar National Vision 2030, the development of better data and profiles are a necessary but insufficient approach to child well-being. QNV 2030 requires development policy to optimise child well-being **because the time frame to meet the aims of the Qatar National Vision 2030 encompasses just a single generation.** Babies born in 2010 will be in their first steps in adult life at that point and will be embarking on their early career, or in higher and advanced education. The emphasis in the Qatar National Vision on health and education in 2030 crucially means that investment in today's children needs to be carefully considered and prioritised. Educational attainment, while significantly aided by good schools and a well-performing educational system also relies on improving children's well-being early in infancy in order to secure the basis for cognitive, social and emotional development that is crucial for social development and human capital.

Adopting a child well-being approach for policy in Qatar is thus not just one of measurement but will require significant policy development re-prioritisation. What current policy makers see as educational policy 'investment' – the infrastructure of Education City, the new Independent School

⁹ Lippman L., Anderson Moore K. and McIntosh H (2009) *Positive Indicators of Child Well-Being: A Conceptual Framework, Measures and Methodological Issues*, Innocenti Working Paper 2009-21. Florence: UNICEF Innocenti Research Centre

¹⁰ Karoly L and Mattock M (2006) *Qatar Supreme Council for Family Affairs Database of Social Indicators, Final Report*, Santa Monica, Doha: RAND-Qatar Policy Institute

model, the proposed vocational colleges all demonstrate a valid concern to increase educational performance and skill levels in Qatari adults and the workforce. But the emphasis of such investment is on older children, on public formal education and on the characteristics of the current stock of inadequately skilled workforce and this misses the critical importance of children's formative early years in infancy and of effects of informal familial activity and parenting on children's development. A holistic childhood-based policy with concerns to maximise social and human development in Qatar by 2030 needs realignment to invest earlier in childhood.

Such an approach requires a cross-governmental approach, as crucially important trade-offs exist across dimensions of Government activity that are not normally considered together. Pre-natal health, post natal services, baby and toddler based investments all require co-ordinating government departments with different sets of responsibilities for health, for education and for family support. Policy development will require better co-ordination of both data gathering and evaluation across children by age-groups and activities in order to join up policy inputs and outcomes across life-histories so that they match and reinforce the developmental process for childhood. This report provides a preliminary outline of such an approach with the aim to promote and sustain better outcomes for both human and social development in order to match the 2030 Vision.

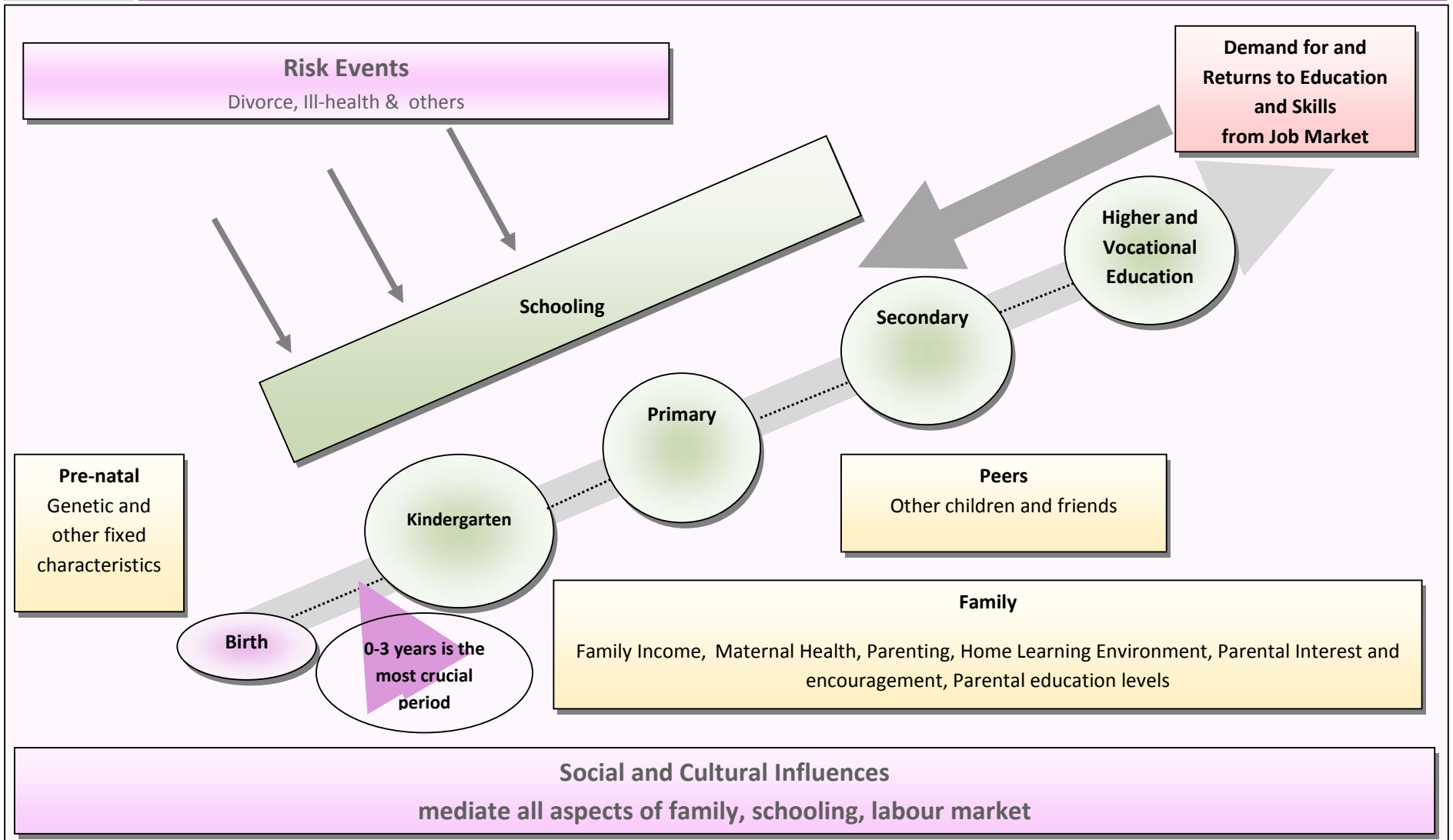
This report has two main foci:

- To provide a fuller and more detailed outline of how a policy approach based on child well-being could assist Qatar in developing its 2030 Vision and to map out early headlines
- To illustrate how perceived problems in the educational performance and labour market structures could be interpreted and addressed using the approach of child well-being.

Figure 1 provides a schematic representation of the child well-being policy approach and the associated known risks to and drivers of well-being. The period of childhood is represented as the upward pointing grey arrow from birth through to the age of 18. On that arrow are the formal stages of education, framed by the factors that are internationally recognised to influence childhood. Pre-natal circumstances, genetic, environmental and maternal health factors are all crucial. The first three years are the most important for later cognitive, social and emotional well-being. Above the main line of childhood are the main risk factors that can alter child-wellbeing: divorce, ill-health, low income. The most important social factors – the family, peers and underlying social influences (such as religious and wider attitudes) run along the bottom of the diagram. A key 'demand factor' - the 'adult' world of work and skills – is represented at the top of the diagram and

Figure 1

Schematic representation of the child well-being policy approach and the associated known risks



covers the signals and incentives these bring to childhood, to schooling and to the development of human capital.

The remainder of this report takes evidence in two main sections:

- first, the general factors that operate across childhood
- second, in Part 3, the logic of **Figure 1** is followed and the stages of childhood followed in discussion of evidence from Qatar and beyond.

2: Children in Qatar

The different international measures of child well-being give us a clear indication of potential risks to child well-being across the whole age group of children (aged 0 to 18). In this first section, some preliminary, easily available evidence is reviewed. Given what we know of the international evidence on the risks to child well-being, what does the situation in Qatar show?

Low Income

Low income has found to be a risk to optimal child emotional and cognitive development and to educational performance independent of other factors. The evidence from US studies is clear (Brooks-Gunn and Duncan 1997)¹¹ but American studies use an absolute measure of poverty and studies from European and other countries are more applicable in theory to Qatar. Evidence of the effect of poverty from these countries shows that German children are more likely not to continue schooling due to contemporary low income (Chevalier et al 2005)¹² and a review of the evidence in UK shows clear links between relative low income and school outcomes (Blanden and Gregg 2004)¹³.

Specific child poverty measures comparable with EU, OECD and UNICEF profiles is a necessary task of great importance in profiling risks to child well-being in Qatar. The calculation of a national relative set of poverty lines for 2006/07 by Demery and Chung¹⁴ provides a starting point for such profiles but does not specifically report on children. The following is a preliminary and partial set of results from a more specific analysis of child poverty of Qatari children.

Demery and Chung report that in 2006/07 9.2% of Qatari households have incomes less than 50% of median equivalised income and that 16.85% have incomes less than 60%. Child poverty incidence is however normally reported at the individual level, to identify the proportion of poor children, and for such analysis the definition of children adopts UNICEF definitions of all those aged up to 18. Headline child poverty rates using this approach are 14% for the poverty line based on 50% of median income and 23.8% for the higher line using 60% of median equivalised income. For the

¹¹ Brooks-Gunn J and Duncan G (1997) *The Effects of Poverty on Children*, Children and Poverty (7) 2 pp 55-71

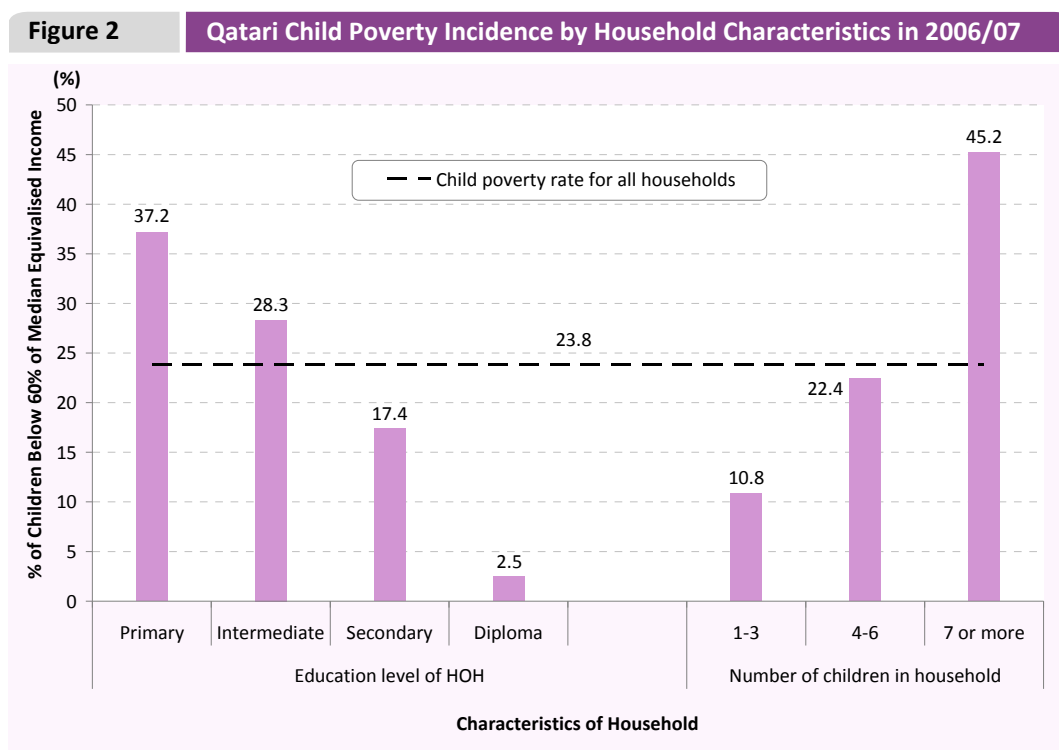
¹² Chevalier A., Harmon C., O'Sullivan V and Walker I (2004) *The Impact of Parental Income and Education on the Schooling of Children*, IZA Discussion Paper 1496, Bonn: IZA.

¹³ Blanden J and Gregg P (2004) Family Income and Educational Attainment: A review of approaches and evidence for Britain, *Oxford Review of Economic Policy* V20, 2, pp 245-263.

¹⁴ Demery D and Chung TP (2009), *"Income and Expenditure Inequality in Qatar, 2006/7"*, Doha: Social Affairs Department, General Secretariat for General Planning.

remainder of this section, the results for the 60% line are reported, in line with the approach used in EU countries.

Figure 2 shows the risk of child poverty is greater for children in certain types of household. Children in households headed by someone with low educational level have far higher poverty rates than average. Over 37% of children are poor in households headed by those with primary level education compared to only 17.4% in those headed by someone with secondary level and 2.5% with diploma level. Child poverty is also high in households with large numbers of children. Over 45% of children in households with seven or more children are poor compared with less than 11% in households with three or less children.



Source: GSDP analysis of HEIS 2006/07.

Notes: Poverty line of 60% of equivalised income

Of course, family size and education levels are related and the regression on the likelihood of poverty by a range of household and other characteristics shown in **Table 1** controls for such confounding factors. The regression results show that there is little difference in geographical risk of poverty once population characteristics are controlled for. However, older heads of household are significantly less likely to be poor, but divorced heads are more than twice as likely as married heads to be poor. Recently unemployed heads have high risks of poverty while the risk of poverty decreases monotonically with rising educational status. With such educational status controlled for we see that there remains a significantly higher risk of poverty as numbers of children rise; the same is true of the number of adults in the household. The age of the youngest child has no effect on poverty risk. Having multiple earners in the household reduces the risk of poverty.

This brief analysis gives some indications of underlying associations of poverty risk and shows that large households, particularly those with few income earners will have higher risk of poverty independent of education status. Divorce seems also to be associated with high risk of child poverty.

Table 1		Regression on risk of household poverty – all Qatari households		
Logit: dependent variable - poverty	Coefficient	Robust Standard Error	p-value	
<i>Explanatory Variables</i>				
Municipality: Doha as omitted reference variable				
Al-Rayyan	-0.127	0.325	0.697	
Umm Salal	0.954	0.521	0.067*	
Al-Khor	-0.703	0.598	0.240	
Al-Wakra	-0.725	0.865	0.402	
Other Municipalities	0.208	0.811	0.798	
Characteristics of Head of Household				
Age	-0.035	0.013	0.009**	
Divorced (married omitted)	2.126	0.596	0.000***	
Economic Status (employed as omitted variable)				
New Unemployed	1.973	0.757	0.009**	
Unemployed	-0.212	1.198	0.860	
Economically inactive	0.126	0.335	0.707	
Disabled	1.969	0.790	0.013	
Education Level (secondary level omitted)				
Illiterate or only read and write	1.819	0.441	0.000***	
Primary and Intermediate	0.884	0.331	0.008**	
Higher Education	-1.678	0.578	0.004**	
Household Characteristics				
Number of Adults	0.404	0.083	0.000***	
Number of Children	0.277	0.071	0.000***	
Age of youngest child in household (omitted variable is zero children)				
Min Age 0-5	0.196	0.574	0.733	
Min Age 6-11	0.195	0.615	0.752	
Min Age 12-17	0.246	0.613	0.688	
Number of Income Earners	-0.898	0.142	0.000***	
Constant	-2.618	0.730	0.000***	

Source: GSDP analysis of HEIS 2006/07 Notes significance at *90% **95% and *** 99%

However, high risk does not necessarily mean high incidence. The potential design of policy to respond to and prevent child poverty should also consider the size of the affected populations as the majority of poor children may be in households with characteristics that are associated with moderate rather than high risk of poverty. **Table 2** shows the composition of poor Qatari children apportioned across poverty risk-factors. Only one fifth of poor children are in households headed by someone with secondary or higher education. However, over one third (35%) of poor children live in households headed by someone with less than primary education level, and a further 44% are in households headed by someone with just primary or intermediate level education. This suggests

Table 2		Shares of Child Poverty by Status of Head of Household and Family Size	
		(%)	
Educational level of HOH			
Less than Primary			34.6
Primary & Intermediate			43.6
Secondary			12.9
More than secondary			9.0
Total			100
Marital Status of HOH			
married			85.7
Divorced or widowed			5.8
other			8.5
Total			100
Total number of children in Household			
1-3			11.7
4-6			52.1
7 or more			36.2
Total			100
Age of youngest child in household			
0-5			78.1
6-11			18.4
12-17			3.5
Total			100

Source: GSDP analysis of HEIS 2006/07

Notes: Poverty line based on 60% of median equivalised income

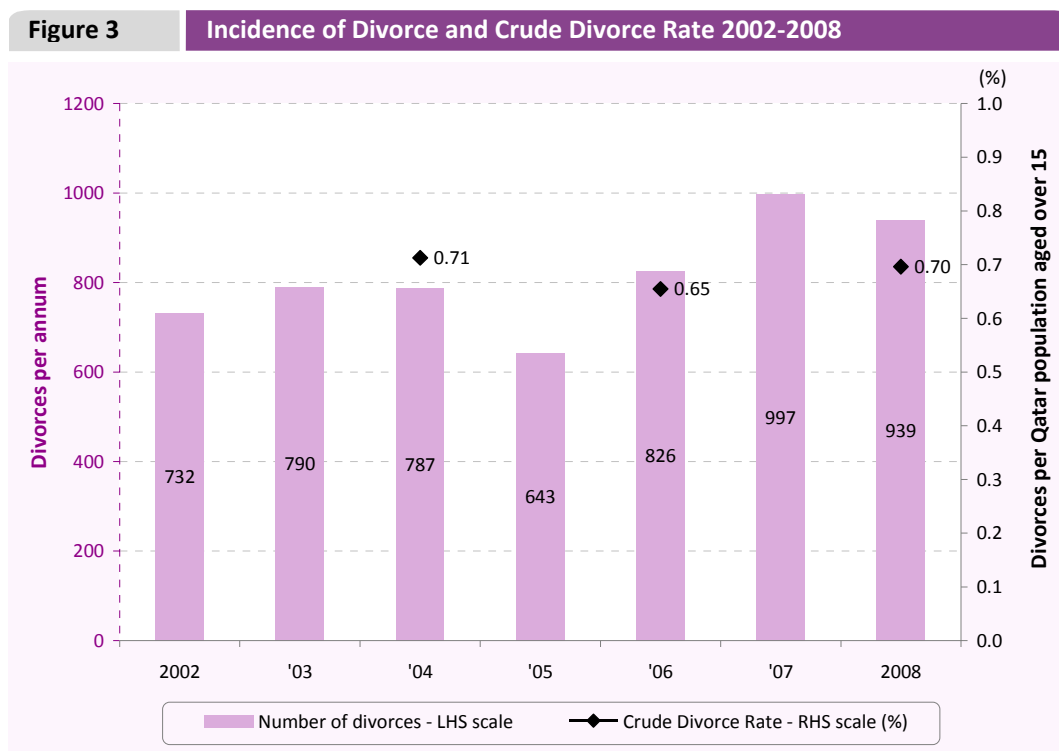
that the risk of poverty associated with low educational achievement will reduce as the current cohort of school children graduate from improved schools with better qualification rates. However, such outcomes additionally require improved income from wages and thus a better return to educational qualification than currently exists, a point we return to later in this report. While divorce is associated with high risk of poverty as show earlier in **Table 1**, only 5.8% of poor children live in households headed by divorced and the vast majority, almost 86%, live with married parents. However, given this preliminary analysis is based on the status of the head of household rather than a direct parental status, some children may also be in the 'Other' category.

Large household size and numbers of children are clear risk factors in child poverty and over 36% of all poor children live in households with seven or more children. The majority of poor children, 52%, are in more middle sized households with 4 to 6 children and almost 12% are in smaller households with 3 or fewer children. On the other hand, **Table 2** showed no difference in associated risk with age of the youngest child in the household but the composition of child poverty is nevertheless heavily skewed to younger children and over 78% occurs in households where the youngest child is aged 5 or less. Based on a study by GSDP utilising QSA's 2006/7 HIES, female employment is

affected by not only her schooling level but also by the number of children at home. The low maternal employment is further supported by an analysis using the LFS which indicates that the likelihood of female labour force participation is reduced by the number of children below the age of 5 in the household (GSDP, 2010). The shares of child poverty decline as the youngest child in the house ages, with around 18% of all poor children living in households where the youngest child is of primary school age (6-11) and only 3% of poverty where the youngest child is aged twelve or over. Another reason for the lower incidence in older children may be that the other older children in the family are earners but still remain at home prior to marriage.

Resources available for this report have not allowed a fuller and deeper analysis of child poverty and it is recommended that research investment is made to analyse child poverty and its association with family composition, income sources in the household and risk factors such as child and adult disability, non-employment of adults and parents, maternal earnings and income and wider gender issues that reflect the reduced opportunities for Qatari women to have non-employment income (from investment, sponsorship of migrants and in silent partner status in foreign business).

Divorce



Sources: Table 3 QSA (2009) Vital Statistics Annual Bulletin (Marriages and Divorces) (2008) and GSDP calculations of divorce rate using Qatari only adult populations.

The incidence of divorce is increasing in Qatar. Data from Qatar Statistics Authority show a clear upward trend in the numbers of divorces being recorded. Between 1999 and 2008 the numerical growth is around 65% (based on the average of the latest three years of 2006, 2007 and 2008). This

means that in 10 years the annual numbers of divorces has risen from under 500 to over 900, an annual average rate growth of 9.9%. However, higher numerical incidence needs to be related to underlying 'populations at risk' of divorce, in other words the stock of marriages. Official QSA estimates calculate a divorce rate using a crude denominator based on the total population aged over 15. Such data suggests a downward trend, falling from around 1% to 0.65% in recent years. However, with large levels of immigration, the majority unaccompanied migrants, means that denominators based on total population are misleading. Our estimates for 2002, 2004 and 2008 based solely on the Qatari population aged 15 and over are shown in **Figure 3** alongside the raw numbers of incidence from 2002 to 2008. The trend in population adjusted divorce rate appears flat, clearly suggesting that trends on pure numbers are likely to over-emphasise a rising trend and that QSA estimates are biased to show decline. El-Haddad reports that Qatar has high divorce rates across GCC countries when comparing annual divorce and marriage figures with "*the lowest rates in Bahrain (17.7% in 2001), and the highest rates in Qatar (36.5% in 1997)*" (2003 p.11)¹⁵. Given the high political profile given to increasing divorce incidence in local press and other sources, it is crucial to have the correct trends for analysis.

It is recommended that future calculations of divorce rates reflect an estimate of the annual stock of marriages based on those existing in the 2004 Census, annually updated for cumulative changes from inflows (new marriage) and outflows (deaths and divorces) to replace the current incorrectly specified population-based denominator figures used by QSA. Additionally, the adoption of supplementary measures based on new marriages to calculate attrition rates of divorce over time are more likely to identify changing trends in new marriages. Additionally, better longitudinal profiling of all marriages is required so that pre-determinant factors as well as factors within marriage can be better understood in divorce causation. A final specific research recommendation is to address the prevalence of re-marriage post-divorce and its determinants.

Most divorces occur between the ages of 25 and 39 and the high fertility rates of Qatari women within marriages and the average age at marriage together suggest that children of young age are more likely to be affected by divorce. What is the effect of divorce on child-wellbeing? There are short-term effects that can follow on from the event of separation. But otherwise international evidence from studies on divorced families and the outcomes for children in Western countries have tended to show that poor outcomes for child-wellbeing are associated with parental conflict and the absence of post-divorce contact with one parent (usually the father). Continued close involvement with children by both parents following divorce, together with consensual arrangements for their custody and development tend to mitigate the short-term impact of the trauma of separation for children. Of course, divorce is not a random event. Unhappy couples are more likely to separate and divorce, and sub-optimal parental behaviour is often an underlying factor in divorce both before and after the fact¹⁶. It is not clear how far such evidence from Western families can be wholly relevant

¹⁵ El-Haddad Y. (2003) Major Trends Affecting Families in the Gulf Countries in *Major Trends Affecting Families: A Background Document*, United Nations Programme on the Family, UNDESA Division for Social Policy and Development.

¹⁶ Cherlin A., Furstenberg F., Chase-Lansdale L., Kiernan K., Robins P., Morison D and Teitler J (1991) Longitudinal Effects of Divorce on children in Great Britain and the United States, *Science*, V 252 (5011) pp 1386-1389; Amato P and Keith B (1991) Parental Divorce and the Well-being of Children: A Meta Analysis, *Psychological Bulletin*, V 110, 1, pp 26-46.

to Arab marriages that have higher incidence of parental and family involvement in selection of spouses and far closer kin and family ties through close social and geographical proximity.

The risk of divorce to child well-being is often over-stated because many confounding factors are not taken into account, especially the income shock of being divorced. The position of single parent families was internationally assessed as a risk factor for child-well-being by recent OECD meta-analysis that found that US evidence, where the stock of evidential studies is large but where the income shock of divorce is high for children, negatively skewed international evidence. In other countries the maximum effect of growing up in a single-parent family on children's well-being is small¹⁷. The crucial importance of this research is that single parenthood need not be prejudicial to child well-being and that the role of both informal personal and family based responses and formal government policy based responses to single motherhood is fundamental to the extent of impact on child well-being.

Evidence from Qatar appears to show that the risk of poverty and thus potential detriments to child-well being after divorce are high. However, the fundamental risk of child poverty on separation and divorce should be lessened by the obligations to pay maintenance to children under The Family Act. Obtaining orders for child maintenance and their enforcement is available on a comprehensive and universal basis for all divorced families with children and Qatar's report to the UNCRC makes great emphasis on these provisions as providing equitable treatment¹⁸.

It is recommended that a detailed and analytically robust analysis of the effects of divorce and living in single parent families is undertaken in Qatar and that the role of employment, state benefits and child maintenance payments be specifically reviewed to assess how far income shocks and other detrimental effects of divorce can be mitigated in the future.

Maternal Mental Health

Parental, especially maternal, depression is a major risk factor for child well-being throughout childhood. Figures from WHO Health Survey 2006 report the proportions of the adult population¹⁹ with a self-reported formal diagnosis of depressive illness who are additionally receiving medication. The age profile for this is highly skewed away from older people, with thus much higher incidence in adult life during parenthood - 39% of all 18-29 year olds, 26% of all 30-44 year olds and 33% of all 45-59 year olds. A study of Qatari mothers of disabled children found higher rates of mental ill-health and identified higher risks in families with more than one child with a disability (Al-Kuwari 2007)²⁰. Psychiatric evidence from Qatari women has pointed to low levels of phobias based on social or spatial grounds than in the West due to cultural norms of 'houseboundness' and accompanied excursions. A general high level of anxiety and higher phobic reaction to travel, particularly by air was prevalent. Maternal factors for phobias were low, *“Childbirth was not a precipitating factor of morbid fears, except in one patient with a stillbirth. Women in this culture are proud of giving birth to many children, who are also known to cement the marriage if they include*

¹⁷ OECD 2009 – op-cit – Chapter 5.

¹⁸ UNCRC - CRC/C/QAT/2 16 December 2008

¹⁹ Refers to Qataris and non-Qataris

²⁰ Al-Kuwari M (2007) Psychological health of mothers caring for mentally disabled children in Qatar, *Neurosciences*, Vol 12 (4) pp 312-317.

boys. Therefore, childbirth is generally associated with positive cultural values.” (El-Islam 1994 p.139)²¹

Such high reported incidences of poor women’s mental health require further investigation and confirmation. There is evidence from UAE that high rates of depressive symptoms are prevalent there in women presenting at primary health centres and this may be indicative of the Qatari situation (Hamdan, Hawamdeh and Hussein 2008)²²; however, more research is needed, particularly of maternal depressive illness. If found to be representative then detailed consideration of the underlying causes of and treatments for such a profile of maternal mental health require urgent policy attention²³.

Children’s well being measures – next steps

These three preliminary profiles of aspects of child well-being represent a first step to show the prevalence and relevance of factors that could be brought to bear on a child well-being approach as part of the Qatar 2030 Vision. These are partial, and very early suggestions for the development of a more comprehensive approach to measurement and the development of indicators are given in the concluding set of policy recommendations.

Section 3 of the report examines the assessment of a childhood profile of child well-being that can be brought to bear on the current cohort of children in Qatar and their outcomes in 2030.

3: Childhood, Child Development and Well-being in Qatar

The motivation in commissioning this report was primarily posited on the area of human capital development with clear links to the requirements of having a high skilled and qualified labour market in 2030 and the current, well-known problems of current human capital performance in Qatar: of children in school, enrolment rates in tertiary education and the missing incentives from the low returns to education from wages in the labour market. Consequently the study has approached the problem by using a framework that relies on human capital development that is based on what is known from international evidence about optimal child development. Child development is a process that enables a set of cognitive, social and emotional assets to be formed and thus maximising those assets to promote human and social development in the Qatar National Vision 2030 is a crucial element of any policy approach.

Human capital theory sets out to show and explain the development of education, qualifications and skills, together with good health. Matching this approach to children, based on economic models of investment and returns, leads to an appreciation of the huge pre-determining effects of early childhood. Several important factors that lead to good outcomes in human capital are clear:

²¹ El-Islam M F (1994) Cultural aspects of morbid fears in Qatari women, *Social Psychiatry and Psychiatric Epidemiology* Vol 29 (3) pp 137-140.

²² Hamdan A., Hawamdeh S. and Hussein A (2008) The Prevalence and Correlates of Depressive Symptoms among Arab Women in a Primary Health Care Setting, *The International Journal of Psychiatry in Medicine*, Vol 38, (4), pp. 453-467

²³ Evidence of somatic symptoms from neurosis in Qatari women is of long-standing – see, for instance, El-Islam M (1975) Culture Bound Neurosis in Qatari Women, *Social Psychiatry* 10, 25-29 (1975)

- Later skills build on earlier skills
- Development occurs in multiple stages
- Human development involves the interaction of nature and nurture
- Human capital, skills and capabilities involve multiple dimensions. (Kilburn and Karoly 2008 p.5)

It is accumulated high quality longitudinal evidence from birth cohort surveys and similar studies and long-term evaluation of policy interventions early in childhood, together with increased understanding of the physiological development of the human brain during infancy and childhood, that has allowed policy makers and researchers across the world to understand how much depends on investing early in childhood. Research on childhood shows *that returns to investments during the infancy stages are highly beneficial*. The Nobel Prize-winning economist, James Heckman, puts it quite simply, *“The real question is how to use the available funds wisely. The best evidence supports the policy prescription: Invest in the Very Young.”*²⁴

The evidence of the importance of early infancy on later cognitive, social and emotional abilities and on health is now considerable. Much evidence comes from analysing the antecedents to problems in adulthood. In the USA, the Adverse Childhood Experiences research programme has established a considerable body of research that shows the lifetime pathways of poor adult outcomes, such as premature mortality, disease and disability, and unhealthy behaviours (Felitti et al.(2005)²⁵ for instance. A full list of findings can be seen at the US Department of Health and Human Services’ Centers for Disease Control and Prevention²⁶). The interaction of cognitive development and brain development in early children and the importance of familial and environmental factors have been established through medical neuroscience and psychological research that uses field and family studies to show how parenting and child-centred learning and development in the home are crucial to proper development. The US research, undertaken through the Harvard based Center on the Developing Child and summarised in 2007 by the National Scientific Council on the Developing Child²⁷, brings together not only evidence on causation but also the evaluation evidence on programme interventions in early childhood. This evaluation evidence, such as Heckman et al’s study of the Perry Pre-school Programme in the 1960s and later adult outcomes clearly vindicates both the efficacy and the cost-effectiveness of early preventative childhood investment (Heckman et al 2009)²⁸. In the UK, emerging evidence from the longitudinal study that combined medical data with social and economic study in the Avon Longitudinal Study of Parents and Children (ALSPAC) is

²⁴ Heckman J (2000) Fostering Human Capital, *Research in Economics* V.54, Issue 1, pp 3-56

²⁵ Felitti, V., Anda R., Nordenberg D., Williamson D., Spitz A., Edwards V., Koss M. and Marks J. “Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study,” *American Journal of Preventive Medicine*, Vol. 14, No. 4, May 1998, pp. 245–258.

²⁶ <http://www.cdc.gov/nccdphp/ACE/>

²⁷ National Scientific Council on the Developing Child (2007) A Science-Based Framework for Early Childhood Policy, Cambridge MA: NSCDC

²⁸ Heckman J. Moon S., Pinto R., Savelyev R. and Yavitz A (2009) The Rate Of Return To The High/Scope Perry Preschool Program, NBER Working Paper 15471, Cambridge MA: NBER.

also giving clear indications of combinations of cognitive and educational outcomes for young adults based on parental behaviour and household factors during early infancy²⁹.

This report will integrate some of the main findings from such research and other studies in the following section that follows the time-line of childhood shown earlier in **Figure 1**.

Pre-Natal Circumstances

There are many influences of child outcomes that occur prior to birth. Family income and parental education levels are often fixed events at birth and poverty profiling to some extent gives cross-sectional evidence on how important this is. However, longitudinal data produces evidence of much better quality but is absent in Qatar. International evidence is additionally clear concerning issues of maternal health and genetic risk of congenital conditions.

Consanguineous marriage is a highly prevalent risk factor for Qatari births. Its prevalence across the Arab world is a tradition with long cultural tradition and promotes notions of family solidarity and family cohesion, in which the marriage of a man and his father's brother's daughter (*bint 'amm* in Arabic) is prevalent. This reinforces the close proximity and intensity of familial ties, in which in-laws form part of what has been termed a 'functionally extended family'. Cultural reasons of maintaining family honour alongside the economic retention of resources within the family have been put forward as underlying reasons for this practice. No matter the reasons, the results are that the family unit is protected from external influences and essentially maintains the same family relationships that existed before marriage³⁰. Nagy, describing the social segmentation of Qatari society, reports, "*The idea and label 'family' in Qatar often identifies broad social and cultural groups derived from place of origin, shared cultural traditions and religious sect. Consequently, consanguineal families falling into similar categories are often related through patterns of intermarriage*" (Nagy 2006 p 126)³¹.

There are three studies that document the health outcomes of Qatari consanguineous marriages. The first, The Qatar Family Health Survey of 1998, was not available for reference in this report. The second, using a social survey of healthcare patients gave a prevalence level of 54% of marriages (Bener and Hussain, 2006)³² of which 34.8% were first cousin marriages. Parental rates for this sample had lower prevalence, only 46% of husbands' parents and 42% of wives' parents from consanguineous marriages, and the rising incidence across a single generation is of concern if such growth can be extrapolated to 2030, as rates could exceed 60% on a linear trend. However, rising education levels, effective public health information and other changes in marriage practice or in the preferences of the Qatari population may prevent this from occurring. The third study, (Sandridge et

²⁹ See <http://www.bristol.ac.uk/alspac/>

³⁰ Khat M (1997) 'Endogamy in the Arab World' in Teebi A. and Farag T (eds) *Genetic disorders among Arab populations*, edition 30 of Oxford monographs on medical genetics, New York: Oxford University Press

³¹ Nagy s (2006) Making Room for Migrants, Making Sense of Difference: Spatial and Ideological Expressions of Social Diversity in Urban Qatar, *Urban Studies*, Vol. 43, No. 1, 119–137.

³² Bener A and Hussain R. (2006) Consanguineous unions and child health in the State of Qatar, *Paediatric and Perinatal Epidemiology*, 20, 372–378.

al 2010)³³ used a sample of Qatari government employees and found lower levels, with 44% marriages to a 'blood relative', of which 22% were first cousin marriages.

The effects of consanguineous marriage on children's health and development are well known in the literature as giving rise to a number of physical and mental disabilities. Berner and Hussain found, "a statistically significant increase in the risk of mental retardation and epilepsy among offspring of children in first cousin unions, in accordance with the findings of a number of studies that have reported a link between parental consanguinity and low IQ levels in the offspring" (ibid p. 376). The findings of mental retardation relate to conditions that are considered severe. However, other studies in the field elsewhere in the world have found direct associations between consanguineous marriage and lower level intellectual debilitation such as reading skills and dyslexia (Abu Rabia and Maroun 2004)³⁴ and in more general cognitive ability and I.Q or similar measures of intellectual capability (Afzal M 1988)³⁵ and (Bashi J 1977)³⁶.

Such evidence is crucially important for two reasons: first, it suggests that a better understanding of mild mental retardation and intellectual and reading deficits across a wider section of Qatari children may help in understanding some aspects of widespread poor educational performance; second, at present, definitions of 'special needs' and disabled children in Qatar are linked to the severe end of the continuum of disability and services allocated accordingly, and this approach has the potential to miss a wider prevalence of milder cognitive disability and thus to leave it unrecognised and untreated prior to schooling.

The link between consanguineous marriage and direct intellectual impairment is not the only threat to child well-being, with higher incidence of asthma, leukaemia, and diabetes mellitus all found to be significant in addition. More recent review of consanguinity across Arab states also found increasing rates in the current generation and clearer evidence of postnatal mortality and rates of congenital malformations and an increase in the rate autosomal recessive genetic disorders³⁷. The risk of birth defects in first-cousin marriages may be estimated to be 2-2.5 times a general population rate (Tadmouri et al 2009)³⁸.

The issue of consanguineous marriage is recognised in Qatar as a public health issue, "some types of marriage attitudes are still prevalent among the Qatari society, such as, consanguine (sic) marriages, which are potential dangers on the composition of the physical and emotional well-being of children". (Permanent Population Committee 2009 p. 38)³⁹

³³ Sandridge A., Takeddin J., Al-Kaabi E and Frances Y (2010) Consanguinity In Qatar: Knowledge, Attitude And Practice In A Population Born Between 1946 And 1991, *Journal of Biosocial Science* Vol 42, pp. 59–82,

³⁴ Abu Rabia S and Maroun L (2005) The Effect of Consanguineous Marriage on Reading Disability in the Arab Community, *Dyslexia* Vol 11: pp. 1–21

³⁵ Afzal M (1988) Consequences of Consanguinity on Cognitive Behavior, *Behavior Genetics*, Vol. 18, No. 5, pp 583-594

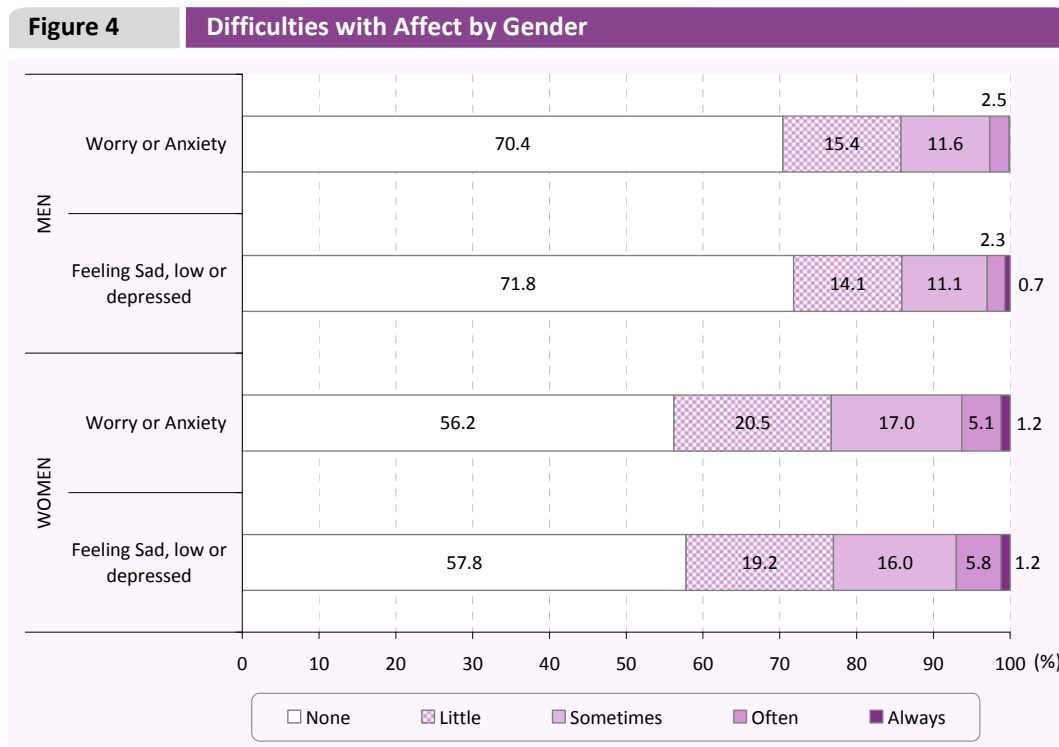
³⁶ Bashi J (1977) Effects of Inbreeding on Cognitive Performance, *Nature*, Vol 266 pp 440-442

³⁷ such as Bardet-Biedl syndrome, Meckel-Gruber syndrome, spinal muscular atrophy, osteopetrosis and renal tubular acidosis, Sanjad-Sakati syndrome, and congenital chloride diarrhoea, all of which have been observed to have relatively high incidence in Arab populations

³⁸ Tadmouri G, Nair P., Obeid T., Al Ali M., Al Khaja N. and A Hamamy H (2009) Consanguinity and reproductive health among Arabs, *Reproductive Health*, 6:17

³⁹ The Permanent Population Committee (2009) The Population of The State of Qatar 2009, Doha:PPC

Another major factor in pre-natal maternal health is stress and anxiety. These conditions increase the release of cortisones that have been identified as having an effect on subsequent child health after birth (see Cookson et al 2009 in the UK, for example)⁴⁰. There is no direct evidence of the prevalence of such conditions in pregnant Qatari women, but the WHO Health Survey from 2006 did find very high incidence of anxiety in prime-age Qatari women. **Figure 4** shows the self-reported incidence of female ‘worry and anxiety’, which will be indicative of levels of potential pre-natal stress together with other more severe depressive symptoms that will be discussed more fully later as a post-natal risk factor from maternal health for child wellbeing.



Source: WHO Health Survey Table 6.11

Infancy and Early Years

Evidence about the health of Qatari infants in their first three or so years is scant. The evidence that exists mainly comes from reported instances of ‘special needs’ through a diagnosis of a level of disability that triggers specific health and other provision. The actual threshold used for diagnostic specification of such special needs or the specific conditions that give rise to the designation of a child having ‘special needs’ are unknown and this makes it difficult to accurately interpret such levels of disability. There is likely to be a significant range of milder disability that is not measured by this approach.

Figures 5 and 6 provide the official figures for disability based on this unknown but restrictive definition of ‘special needs’ for Qatari children. Access to specialist help for severe disability is

⁴⁰ Cookson H, Granell R, Joinson C, Ben-Shlomo Y and Henderson AJ, (2009) ‘Mothers’ anxiety during pregnancy is associated with asthma in their children.’, *Journal of Allergy and Clinical Immunology* Vol. 123 (4): pp 847-53

oversubscribed and has waiting lists and this may be one contributing reason for low reported rates of disability based on a diagnosis of having 'special needs'⁴¹. Some milder cognitive disabilities may only become apparent when schooling begins and as the child grows and this is shown by the increasing rate of 'special needs' disability in **Figure 5**, that rises from 0.3% for the 0-4 age group to 0.9% and 1.0% for the later age-groups. Congenital disability is the main reason for such 'special needs' designation of disabled children, with 87% of all such disability for 0-4 group and around 80% for the older groups as their exposure to illness and accident increases over childhood. **Figure 6** shows that the proportion of such growing disability that is of purely mental disability also grows over the age profile, in part because diagnosis sometimes awaits entry into primary school at age 6, at which a much larger range of conditions are assessed with many less severe cases being assisted within schools through special educational needs programmes.

The data on disability is quite difficult to interpret as it relies on an unknown threshold and exists within a wider set of data from specific surveys from health researchers and wider health surveys that tends to show higher incidence of a much larger range of conditions that can lead to partial disability. The overall rates of disability reported from this 'special needs' definition are obviously low when we compare this to the other evidence that appears later in this report. Particular recommendations about health and disability data will be made in the concluding parts of this report.

Child obesity in young children in Qatar is seen to have high prevalence in the WHO surveys. 1995 data showed Qatar as one of the countries with highest proportions overweight (defined as having Body Mass Index (BMI) scores of twice the standard deviation): 7% of 0-5 year old children (De Onis and Blössner 2000)⁴². **Figure 7** shows more recent data from 2006 for the same age-group. This shows banded BMI scores in relationship to the standard deviation (SD) and the proportion of 'overweight' children⁴³. The incidence of overweight children is high (scores of over 2), and appears to have risen significantly since 1995: 42% of babies less than one, 17% of one year olds, 15% of two year olds, 14% of three year olds and 22% of four year olds were found to have BMI scores of over 2 times the standard deviation. Direct international comparison for 2006 is difficult from purely national data reports as distributions are different and based on slightly differing measures across the current stock of national data reports.

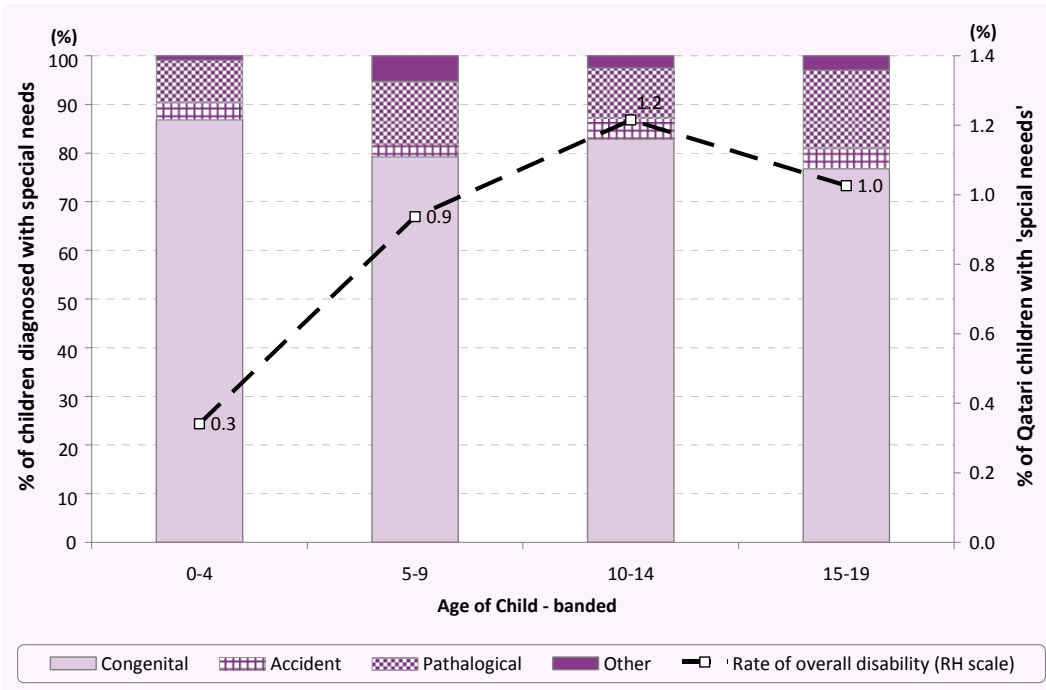
⁴¹ Information provided by The Shafallah Centre during meeting with GSDP.

⁴² de Onis M and Blössner M (2000) Prevalence and trends of overweight among preschool children in developing countries, *American Journal of Clinical Nutrition* Vol 72 pp. 1032–9.

⁴³ Such definition will include those that are subsequently determined as obese (a definition not reported here based on a cut point in the distribution of overall BMIs in the population as we did not have access to the micro-data of the WHO Health Survey for this report and are unable to establish levels of obesity within the overall distribution).

Figure 5

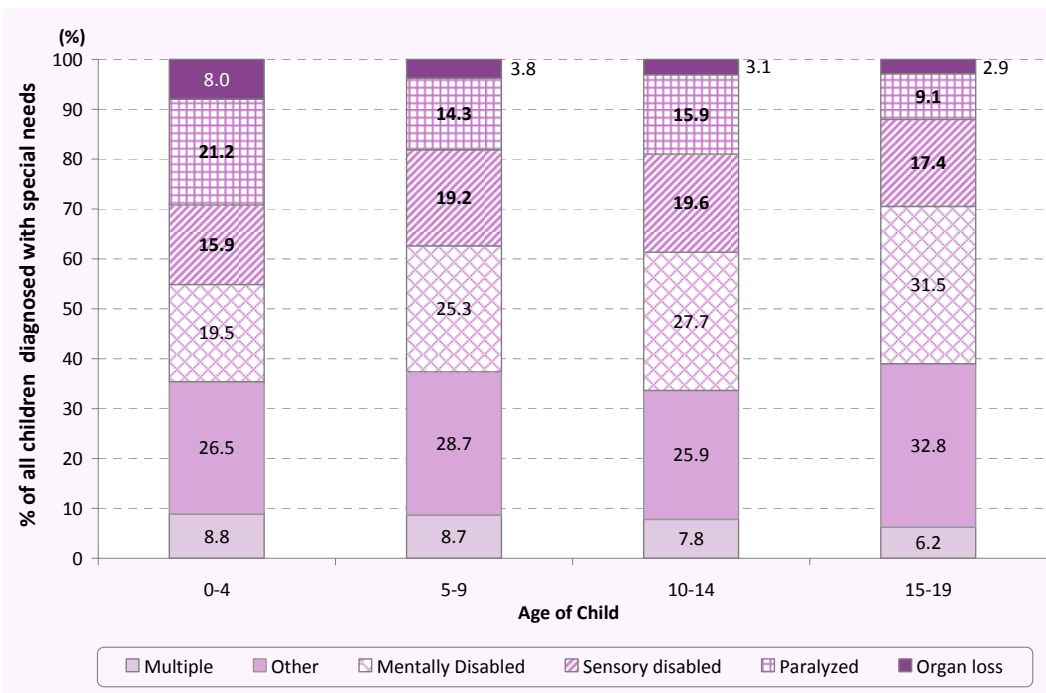
Rates and Cause of Disability for Qatari Children Diagnosed with Special Needs



Source: QSA Annual Statistical Abstract 2007-2008 Table 162

Figure 6

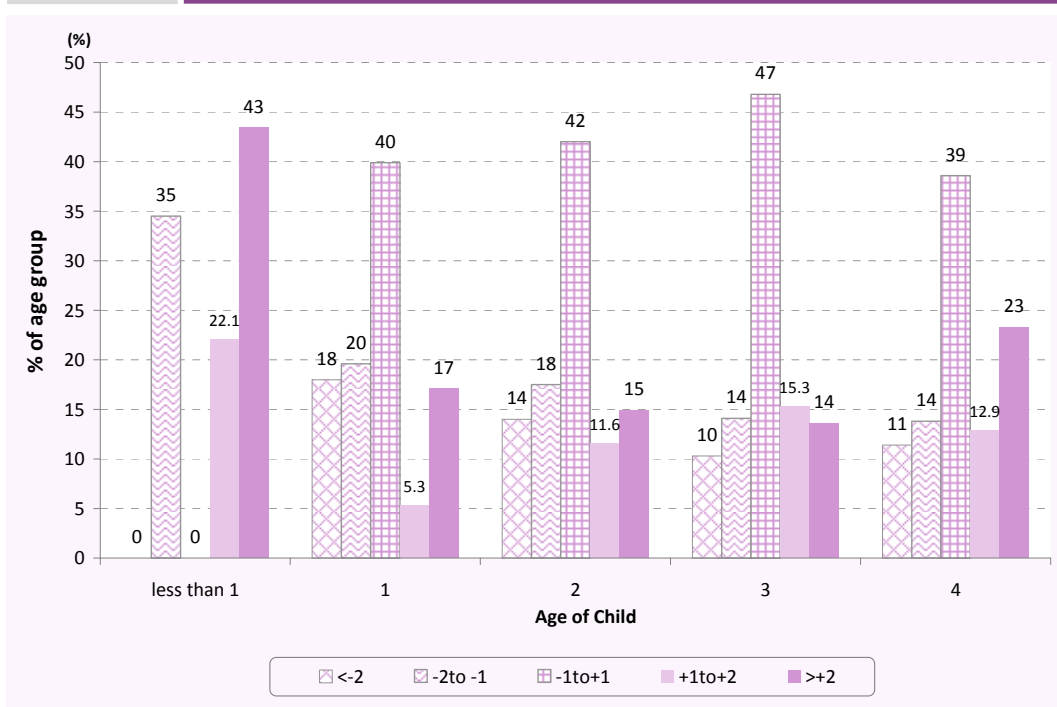
Type of Disability for Qatari Children Diagnosed with Special Needs



Source: QSA Annual Statistical Abstract 2007-2008 Table 162

Figure 7

BMI for age scores for all children aged less than 5 in 2006



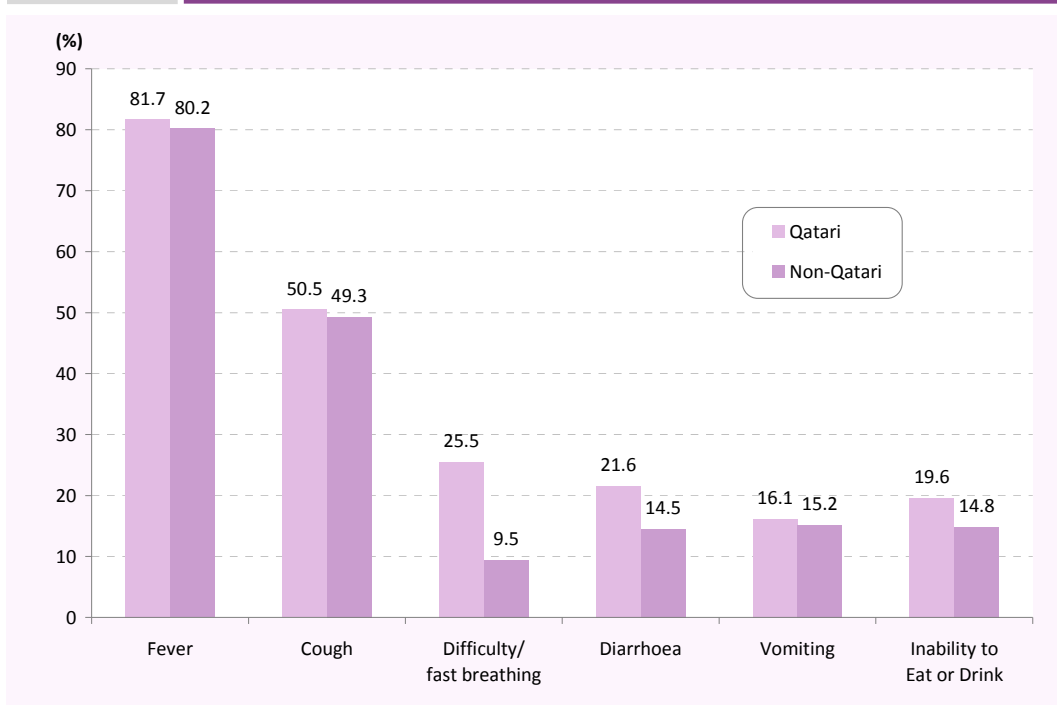
Source: WHO Health Survey 2006 Table 4.4

Notes: both Qatari and non-Qatari children; BMI scores for age; sampling problems due to questionnaire design reported.

Figure 8 shows that Qatari children (aged 0-4) were much more likely to suffer from breathing difficulties, diarrhoea, and eating and drinking difficulties. **Figure 9** shows that these differences were in some part down to differences in household wealth, with the richest households having lower reported recent ill health in children aged less than 5 and lower fever and cough prevalence than the poorest quintile. However, when it came to the condition of breathing difficulties then these were of higher prevalence in the richest quintile, as was reported prevalence of eating and drinking difficulties.

Figure 8

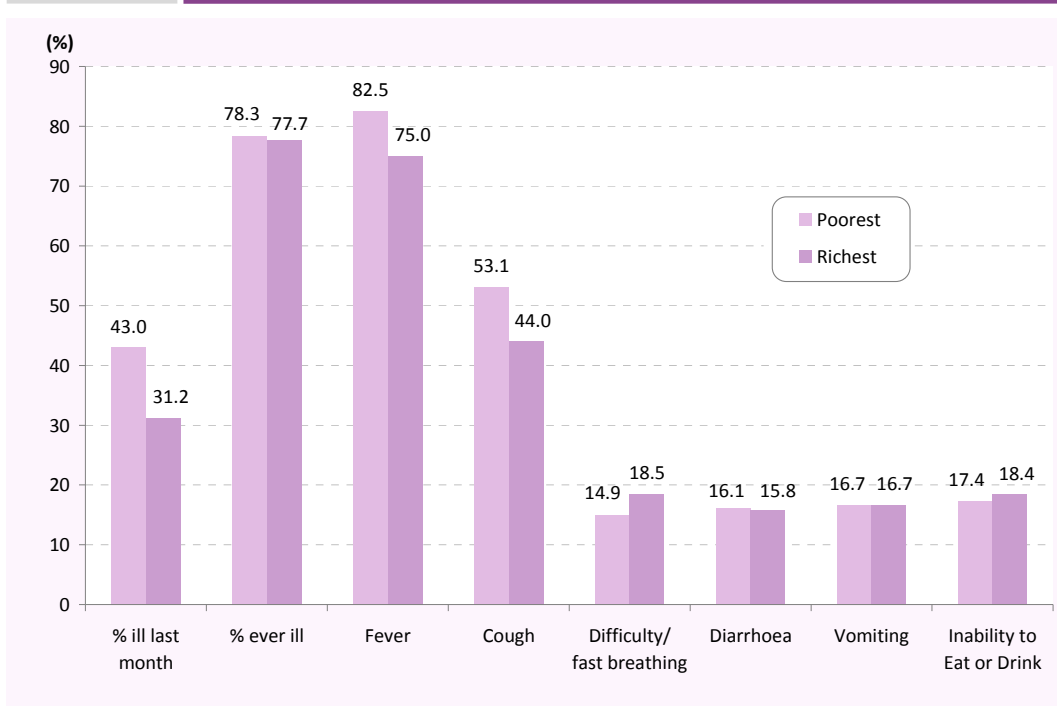
Ill-Health in Children aged 0-4 in 2006



Source: WHO Health Survey 2006 Table 5.15

Figure 9

Differences in Incidence of Child Ill-health for Richest and Poorest Wealth Quintile Groups



Source: WHO Health Survey 2006 Table 5.15

Up-take of immunisation is high in Qatar but inconsistent. WHO Health Survey data shows declining up-take of second and third round immunisations for Diphtheria, Whooping Cough and Tetanus and Hepatitis B. Up-take of MMR, a single immunisation, is far lower. There is also evidence that up-take is higher in wealthier households overall. This suggests that follow-up services for young infants are not consistent – neither in coverage of the population nor in consistency of ensuring take up of staged repeated treatments.

These limited profiles of ill-health and disability in young children provide a partial picture and there is a clear need for better surveys of and reporting of child health beyond up-take of healthcare services. We cover additional material on ill-health that is available for particular age groups of children in subsequent parts of the report.

Child Development in Infancy

It is difficult to overstate the importance of growing evidence that shows how early childhood factors in infancy lead to core predictors of later well-being and educational and social performance. The difficulty in policy terms is that the processes that determine this are primarily private ones – based in maternal and family based practices in the home and the way in which young infants learn about the world, and in doing so define a set of key characteristics in terms of cognitive, social and emotional resources that are life-long in their persistence. A recent study of the differences in educational outcomes for these children at the age of 17 found that differences between children that apparently related to differences in family income (with higher income being found to be associated with higher educational performance) disappeared when early infancy practices were taken into account. Parenting and the style of parenting during infancy– the observed mother-child patterns of reinforcement and promotion of child-centred behaviour- accounted for large scale differences in outcomes some 15 years later⁴⁴. These findings are consistent with a larger body of US evidence that is emerging from combined medico-social studies of child development such as those from the Harvard University based Center on the Developing Child.

The heightened risk of cognitive deficits in Qatari children that arises from the high incidence of consanguineous marriage suggests that post-natal practices that promote high quality cognitive development for Qatari infants are paramount in order to mitigate any underlying risk for lowered intellectual development. Does Qatar have familial and other practices that can lessen the inherent risks that arise from genetic endogamy?

First, it is important to understand what international evidence demonstrates as fundamentally important in early child development in children. We start with the position of infants aged under 3 years. A recent review of the evidence says: ***‘Early child health and neurodevelopment remain the core of human asset development because what is formed in the brain is the basis for later functioning. This includes cognition (problem solving), language and literacy skills, emotional regulation, curiosity, caring for others, creativity and fine and gross motor skills. These important attributes, which derive from the critical early interaction between a child’s experience and the***

⁴⁴ Waldfogel J and Washbrook E. (2008) *Early Years Policy*, London: Sutton Trust-Carnegie Summit: Social Mobility and Education Policy- mimeo.

*developing brain, form the basis not only for child well-being (an important end in itself) but also for later adult productivity at work and social relations within the family and community'*⁴⁵

When we turn to see how far there is evidence on what happens in terms of parenting and child development in Qatari families there is very little indeed to go on. However, there are some indicators of concern that point to factors that may increase rather than mitigate underlying risk of cognitive deficit.

First, infant nutrition and particularly breast-feeding are known to be crucial for subsequent cognitive and other development. Qatar has reported low incidence of breast-feeding. UNICEF data shows a 12% exclusive breast-feeding rate for the first six months of infancy in Qatar⁴⁶. However, this data is now quite old, based on 1998 prevalence. Earlier data from 1991 and the Child Health Survey of Qatar are reported as showing an 88%-90% rate for breastfeeding⁴⁷. Other more recent evidence of prevalence of breast-feeding is subject to significant selection bias in sampling. For instance, a survey of users of post-natal services in well baby clinics, paediatric clinics and primary healthcare centres by Bener et al in 2006/07 reported a rate for exclusive breastfeeding at 59% and that duration of such practice was related to maternal age.^{48,49} Student research from an Independent School showed a 65% exclusive breast feeding rate on a sample based on students and education staff (with obvious bias upwards for parental education levels associated with first tranche of Independent Schools – see later in this report).⁵⁰ This range of non-consistent and old data work against a clear understanding of current breastfeeding incidence and practices and there is a clear need for more recent comprehensive data based on representative survey.

Second, with increasing levels of female employment maternity leave provision for working mothers becomes more important in ensuring child development. The new HR law limits fully paid maternity leave to 60 days, with both the ability to extend on a part or unpaid basis and the ability to return to work full-time additional with more flexible hours after 60 days. However, maternity leave is crucial to the ability for working mothers to provide both breast-feeding and intimate social and cognitive support for babies for longer than merely the first 2 months. Even with more flexible hours and with the ability to move to part-time work, short periods of maternity leave lead to a requirement for substitution of maternal care for the child for large proportions of the day. This in the first year of infancy has consistently been found to have negative effects on child development unless, and such circumstances are not generally found, the provision of such care substitutes care of equal quality and intensity (Waldfogel, op-cit). Emerging evidence from the USA and Europe demonstrates that

⁴⁵ Zuckerman B and Kahn R (2000) Pathways to Early Child Health and Development in Danziger S and Waldfogel J (eds) *Securing the Future: Investing in Children from Birth to College*, New York: Russell Sage.

⁴⁶ UNICEF World Breastfeeding Week 2008 MENA Regional Fact Sheet (based on 1998 data)

⁴⁷ Klitsch M (1994) Six Arab Gulf Nations Show Considerable Variation In Current Fertility Levels and Infant Mortality Rates, *International Family Planning Perspectives*, Vol. 20, (2) pp. 79-81

⁴⁸ Bener A, Ehlayel MS, Alsowaidi S and Sabbah A. (2007) Role of breast feeding in primary prevention of asthma and allergic diseases in a traditional society, *European Annals of Allergy and Clinical Immunology* Vol. 39 (10) pp. 337-43. (Abstract only referred to for report)

⁴⁹ Ehlayel, M. and Bener A (2008) Duration of breast-feeding and the risk of childhood allergic diseases in a developing country, *Allergy and Asthma Proceedings*, Vol 29, (4), pp. 386-391 (Abstract only referred to for report)

⁵⁰ Mohammed L., Mahmud N and Abdullah R. (2008) The awareness about the benefits and practice of breastfeeding among mothers in Qatar <http://www.education.gov.qa/research/samples/breastfeeding.pdf> unpublished mimeo.

maternal work in the first 12 months of infancy has potential detrimental effects on child development unless substituted with replica one to one care. International studies from OECD countries showed that overall indicators of infant health rose with length of maternity leave (Ruhm 1998, 2000)⁵¹. Early post-natal maternal returns to employment were shown to lower follow-up immunisation rates, reduce breast-feeding incidence and longevity and other aspects of parental care. Waldfogel, reviewing the evidence as it relates to US maternal employment, says *“To a large extent, the effects of parental employment are likely to depend on the quality of the substitute caregiver and also on the quality of the parents’ own care. However, whichever direction the effects operate in, it seems likely that earlier work and full-time work would have stronger effects.”* (Waldfogel 2006 p. 50)⁵²

Substituting maternal care for paid childcare in the familial home is related to the near universal employment of female housemaids by Qatari families. While such employment is often argued as being necessitated by female employment, the proportions of households with such maids far outstrips the female employment rate. *“Maids and babysitters are employed by most families regardless of whether mothers are employed outside the home. A ... study in Qatar showed that 90% of a sample of women preferred to maintain their dependence on domestic servants”* (El-Haddad 2003 p.5). The role of such maids and babysitters in providing substitute one-to-one childcare for infants is largely unobserved but the majority are non-Arabic speakers and have no specific qualifications in early years childcare. The threats to familial and social culture posed by these practices have been prominent in debate. However, the practice has large potential impacts on child development and has led to concerns expressed by the Supreme Council for Family Affairs and Her Highness Sheikha Mozah Bint Nasser. Our analysis of the HEIS shows that 90% of Qatari households with children have housemaids, and that employment of housemaids is only slightly lower in poor households (based on a poverty line at 50% of median income), at 73%. We do not know how far such care substitutes equal, worse or better care than maternal care but the safest option for policy makers would be to err on the side of caution and to try to ensure that optimal childcare is provided that is at least equal to maternal care.

Without direct evidence of the impact of poor quality childcare from maids and servants in Qatar, we are forced to rely on the scant evidence that exists from studies of similar practices elsewhere. Qualitative evidence of childcare from domestic servants in the UAE suggests that there are potentially severe effects on emotional and cognitive development from domestic servants, many of whom are primarily employed as domestic workers rather than childcare providers (Roumani 2005)⁵³ who found in general, *“that the amount of time children spend with the family maid by far exceeds the duration recommended by major studies to avoid harm to maternal attachment or increase the probability of problem behaviours... Consequently, many children spend more of their waking hours with the substitute caregiver than they do with their parents”*(ibid p. 154). Evidence from an epidemiological study in Singapore on the incidence of autism considered the impact of foreign domestic servants on development of the syndrome and on wider issues of cognitive

⁵¹ Ruhm C (1998) The Economic Consequences of Parental Leave Mandates: Lessons from Europe. *Quarterly Journal of Economics* 113 (1)pp. 285-318; Ruhm C (2000) Parental Leave and Child Health, *Journal of Health Economics* 19(6) pp 931-960.

⁵² Waldfogel J (2006) *What Children Need*, Cambridge MA, Harvard University Press.

⁵³ Roumani H (2005) Maids in Arabia: the impact of maids as carers on children’s social and emotional development, *Journal of Early Childhood Research* Vol 3; 149-167

development: “Socio-economic factors such as a high prevalence of working parents, the involvement of foreign maids as caregivers and the use of multiple languages have to be considered as contributing to the skill level, behaviour problems and course of this pervasive developmental disability. Reports from social workers and psychologists suggest that there is a lack of stimulation in many homes; children were mainly just fed and kept clean; some were placed on a highchair in front of a TV up to 8 hours a day. This indicates a developmental risk-factor comparable to hospitalism and deprivation syndrome” (Bernard-Opitz, Kwook and Sapuan 2001, p.5)⁵⁴. However, it is important to stress that quality of care matters and that there are potential gains from having domestic servants who are foreign language speakers. Chinese primary school children in Hong Kong were found to have improved English abilities when foreign English speaking domestic servants were employed at home (Kam Tse et al 2009)⁵⁵ However, econometric analysis in Singapore that held confounding factors constant found no significant effect on educational performance from the employment of domestic caregivers/servants (Cho and Quah 2005)⁵⁶

What is crucial is how the experience of the infant child and their brain development and associated cognitive, social and emotional development is influenced by domestic caring – maternal or otherwise. The evidence from high quality research based on longitudinal surveys of children and their families clearly and rigorously demonstrated what is optimal for child development during early infancy:

- Exposure to nurturance and stimulation within an environment where the child can influence and respond to social and other stimuli (stimulation alone, such as from TV watching is not enough). Stress has long-term negative consequences on memory and learning in particular and maternal mental ill-health is a known negative factor. On the other hand, sensitive and responsive caring have been shown to raise later social abilities with peers in pre-school and other settings, to lower the need for special education and reduce behavioural problems.
- Early literacy development has been found to benefit significantly from reading aloud to children. Interacting with them using books is more important than the mere presence of books in the household. Literacy processes are now accepted as beginning earlier through ‘emergent literacy’ prior to school and prior to language acquisition. The risk factors for Arabic and language development from poorly educated and non-Arabic speaking housemaids are potentially higher than those for overall nurturing and sensitive caring even where their education levels are higher than the Qatari mothers who employ them.

It is perhaps wise at this point to return to the earlier point about the underlying heightened risk of cognitive deficit that arises from genetic endogamy for Qatari infants and the potential of post-natal factors to either reinforce or counter such deficit. At the moment, the rather sparse evidence tends

⁵⁴ Bernard-Opitz, V., Kwook, K-W. and Sapuan S. (2001) Epidemiology of autism in Singapore: findings of the first autism survey, *International Journal of Rehabilitation Research*, Vol 24, (1) pp 1-6

⁵⁵ Kam Tse S., Lam R., Loh E., Lam J. and Chan Y-M (2009) English-Speaking Foreign Domestic Helpers and Students’ English Reading Attainment in Hong Kong, *Chinese Education and Society*, vol. 42, no. 3, pp. 49–65.

⁵⁶ Cheo R. and Quah E (2005) Mothers, Maids and Tutors: An Empirical Evaluation of their Effect on Children’s Academic Grades in Singapore, *Education Economics* Vol. 13, No. 3, pp 269–285

to suggest that any underlying potential for deficit will be reinforced through poor breastfeeding practice and through uncertain gains from familial childcare provision.

Health, social service and early education services provide a potential supplementary source of developmental assistance alongside familial care. There have been recent calls to expand maternity and infant care services⁵⁷. Our discussions with stakeholders who are active in the area of young childhood pointed to a lack of capacity in developmental and educational psychologists, paediatric psychiatry, and specialist paediatric nursing, especially in the primary health care sector. While paediatric clinics and 'well baby' provisions are present, the overall balance of provision is unclear and uncertain. There is, we understand from Qatari respondents, no 'visiting nurse' service to mothers and babies after their discharge from hospital based maternity services in Qatar, for instance. When children arrive at school there is additionally no educational psychology service and this was seen by some of our interviewees as problematic in early and correct diagnosis of learning deficiencies and behavioural problems.

Kindergarten years 4-6

Up-take of pre-school kindergarten provision in Qatar has grown since the early 2000s. In 2005/06 over 42 percent of the age-group were enrolled in such provision – up from 30% in 2000/01⁵⁸. This reflects the importance paid to increasing provision as part of overall education reform from K1 through to grade 12 in high school as planned by the Supreme Education Council. The 'Early Years Strategic Plan' proposes that by 2012 all Independent Primary Schools (those who have changed from Ministry of Education status) will have a separate Kindergarten building with 6 or 12 classrooms (capacity of 150 or 300) for children aged 4 -5 and 5-6(KG1 and KG2).

There are no present plans to introduce earlier mandatory school requirements. At present the waiting lists for the emerging stock of newly built premises and their associated Kindergarten provision are too long to necessitate mandation and alternatively uptake is encouraged wherever and whenever possible. By September 2009 there were 32 Kindergarten programmes and 43 Primary schools with new or expanded provision. The purpose built buildings provide larger classrooms (95m²) for two adults (teacher and assistant) for 25 children. Kindergarten provision is full-time (5 hours a day for KG1 and 5.5 hours for KG2).

The curriculum and other managerial parameters for this service have been outlined and the main aims are pedagogical. Independent schools can select and use their own enrolment and intake processes and thus developmental checklists and health/family history and observational data will be collected inconsistently. Kindergarten is designed as part of a process of educational reform to improve subsequent school performance and, at present, there is limited acknowledgement of the need to link back to earlier issues of child development in a strategic way. Improvements in literacy and the improvement in English/Arabic language skills and knowledge for young children are presumed to arise from such extended provision. Kindertartens will additionally provide health promotion and preventative health strategy on health behaviours (eating, exercise) and nursing provision is required in all schools and KG buildings.

⁵⁷ Permanent Population Committee (2009) *Population Policy of Qatar*, Doha: PPC.

⁵⁸ Table 16 page 64, UNCRC - CRC/C/QAT/2 16 December 2008

Allowing young children to access high quality pre-school facilities has an additional potential to allow earlier diagnosis of developmental problems. Currently, much referral occurs on entry into primary school and the emergence of learning and behavioural difficulties in a school environment. Having earlier entry will potentially place greater demands on specific services for special needs earlier in childhood and could lead to less need for later interventions in conditions that are susceptible to short-term interventions. School readiness assessment could be a larger part of a wider aim to assess the range of learning and social capabilities of children entering early years education services.

Primary Aged Children

Profiles of such school aged Qatari children are rare and data is scarce. Studies are few and primarily are those from medical research and these studies add to our growing appreciation about the spread of health. Such research shows that asthma in Qatari children aged 7 to 12 is at similar levels to other developing countries but show an earlier age of onset, with high levels of incidence being linked to the use of burned incense in the home as well as viral infections (Dawod and Hussain 1995)⁵⁹ being important precipitating factors. More recent studies have shown that a family history of asthma contributed more to childhood incidence of asthma in this age group than either indoor or outdoor environmental factors. Boys were found more asthmatic than girls (Bener, Jahani and Sabbah 2005)⁶⁰. Bener et al's 2006/07 study of breastfeeding also show clear links of both breastfeeding practice and longevity on allergy problems of primary aged children (Bener et al (2007), Ehlayel, M. and Bener A (2008) op-cit).

Attention Deficit Hyperactivity Disorder (ADHD) among all (Qatari and non-Qatari) 6-12 year olds at school are 14% for boys (who are known to have higher incidence than girls across international studies) and 4% for girls – giving an overall rate of 9%. There is a strong association to poor school performance for those with this disorder (Bener, Qahtani and Abdelaal 2006)⁶¹. These rates are high by international comparison rates of between on average 5% to 7%. Countries in the Arab region are generally observed to have higher incidence than the USA and Australia. Qatari incidence appears lower than that reported in a similar survey of UAE (14.9%) (ibid). Qatari children in Bener, Qahtani and Abdelaal's study had a much lower incidence overall (13.4% compared to 7.2%) but it is unclear how far this is accounted for by different gender composition of survey samples.

Evidence on ADHD is not accompanied by profiles of learning capabilities or intellectual performance (beyond specific academic test results, which tend to be poor). There is thus no evidence of the extent of milder mental retardation or cognitive disability. Qatar's report to the UNCRC, which reported raw numbers of a variety of 'psychological disorders' in 2006 from hospital referral data, confirms higher incidence for mild and moderate mental retardation for Qatari children compared to non-Qataris but shows a more equal spread of ADHD and poor school performance across both Qatari and non-Qatari children.

⁵⁹ Dawod S and Hussain A (1995) Childhood Asthma in Qatar, *Annals of Allergy, Asthma, & Immunology*, Vol. 75, no4, pp. 360-364

⁶⁰ Bener A., Janahi I. and Sabbah A. (2005) Genetics and environmental risk factors associated with asthma in schoolchildren, *European Annals Of Allergy And Clinical Immunology* 2005, vol. 37, (5), pp. 163-168.

⁶¹ Bener A., Al Qahtani R. and Abdelaal I (2006) The Prevalence of ADHD Among Primary School Children in an Arabian Society, *Journal of Attention Disorders* V.10 (1)pp 77-82

Secondary Aged Children

Many of the indicators of child well-being used in international comparisons take measures of subjective well-being from older children. No such data was found in Qatar for this report. Similarly, risk factors such as smoking, (alcohol use is not appropriate for Qatar) are not regularly reported. WHO data give a figure of 18% of 15-19 year olds as smokers based on 1999 data⁶². Otherwise, the little data that exists on this age-group relies on medical studies. A study of adolescent boys confirms high proportions are overweight, 33%, and that dieting was prevalent with 10% extreme dieters and 37% intermediate dieters. Psychological problems with extreme dieters included sleeping problems, persistent tiredness and low mood (Bener et al 2006)⁶³.

General Evidence on School Aged Children

More general evidence across all children is a little more prevalent. Vitamin D deficiency is high across all children aged under 16 at 68.8% with the majority of cases in the 11-16 age group. Overall rates were more common among girls (51.4%) than boys (48.6%) and while exposure to sunlight was limited across gender and age profiles, it was significantly lower in vitamin D deficient children and particularly so in the case of girls. Low rates of breast feeding of less than 6 months, a family history of diabetes mellitus and low levels of physical activity were significant predictors for vitamin D deficiency in Qatari children (Bener, Al-Ali and Hoffman 2009)⁶⁴. Qatari children of the same age group with type 1 diabetes were found to have associated higher levels of vitamin D deficiency, pointing to the probably effectiveness of earlier dietary supplementation and/or improved breastfeeding rates and durations (Bener et al 2009)⁶⁵.

Earlier discussion of the 2006 WHO survey evidence of the incidence of obesity in young children aged 0-5 pointed to high proportions of young children being overweight. This data came from parental estimates of weight and height. Similarly, Beber et al's 2006 study found a 33% incidence of overweight adolescent boys. However, clear and consistent data across a wider age group of children aged 6-18 years old suggests less evidence of high levels of overweight and obesity. Bener and Kamal (2005)⁶⁶ describe the prevalence of under-weight, over-weight, and obesity for Qatari children as below international reference values, except for girls aged 6-9 years. However, they report that more males than females were over-weight or obese and the prevalence increased with age. As a result, a good percentage of the Qatari children were at risk of being over-weight. There is a clear need to clarify evidence on child obesity and to set up regular surveys to establish consistent trends.

⁶² <http://www.emro.who.int/TFI/CountryProfile-Part6.htm>

⁶³ Bener A., Kamal A., Tewfik I and Sabuncuoglu O. (2005) Prevalence of dieting, overweight, body image satisfaction and associated psychological problems in adolescent boys, *Nutrition and Food Science*, Vol 36, (5) pp 295-304.

⁶⁴ Bener A, Al-Ali M, Hoffmann G (2009) High prevalence of vitamin D deficiency in young children in a highly sunny humid country: a global health problem, *Minerva Paediatrics*. Vol 61(1):15-22.

⁶⁵ Bener A , Alsaied A., Al-Ali M, Al-Kubaisi A., Basha B., Abraham A., Guiter G and Mian M (2009) High prevalence of vitamin D deficiency in type 1 diabetes mellitus and healthy children, *Acta Diabetologica* Vol 46, (3) pp 183-189.

⁶⁶ Bener, A and Kamal, A (2005) Growth Patterns of Qatari School Children and Adolescents Aged 6-18 Years, *The Journal of Health, Population and Nutrition*, Vol. 23, No. 3, pp. 250-258

Primary and Secondary School Performance

At this point we return to the underlying motivation for this report on child well-being: the development of human capital and the current very poor performance of Qatari children at school.

There is a large amount of international evidence on what determines school performance and what happens prior to school and then what happens subsequently alongside schooling in the family is of huge importance. Evidence that supports this is present in Qatar from studies of student motivation at Qatar University, *“family affluence, parental involvement in the child’s school, the number of culturally enriching materials found in the home, and the general atmosphere of the school played significant roles in discriminating between students who are motivated to achieve academically and those who do not possess such motivation”* (Baker, Kanan and Al-Misnad 2008 p.133)⁶⁷.

The Effect of Family on School Education

We must take great care when generalising from evidence from Western industrial countries. There is a clear need to appreciate the potential **scope** of familial effects on Qatari children’s education. We have already seen significant evidence of lower intellectual and cognitive abilities resulting from genetic endogamy and resulting preponderance of illnesses that can hamper education. These, together with familial practices of low breastfeeding and high reliance on domestic maids and other servants in the up-bringing of children, are cumulative risk factors.

But it is crucial to address the other ways that families influence school performance because such evidence is of long-standing. Rutter, in 1980 concluded, *“What is needed for optimal cognitive development is a combination of active learning experiences that promote cognitive competence together with a social context in which the style of interaction and relationships promotes self-confidence and an active interest in seeking to learn independently of formal instruction”*. The child’s active rather than passive participation is crucial with *“the provision of a varied, interesting and meaningful experiences rather than just high levels of sensory input; direct teaching of specific skills and knowledge; a sensitivity and responsiveness in reacting to children’s approaches and questions; and a reciprocity in patterns of interaction”* (Rutter 1985 p. 699)⁶⁸. He continued, *“It is striking how very limited are the benefits stemming from interventions that are confined to the school environment. Not only may the experience at home provide something not readily available in school but also it seems that the skills involved apply as much to processes of attention, perseverance, task*

⁶⁷ Baker A., Kanan H and Al-Misnad S. (2008) Factors that discriminate best between students identified as motivated or not-motivated to achieve academically, *Educational Research and Review* Vol. 3 (4), pp. 128-136.

On first consideration the association of poor motivation with stronger parental involvement in earlier school life would seem to contradict expectations from evidence from US and other studies. However, such Qatari parental school involvement was specifically linked to their children having problems and may be construed as being based on being summoned by the school because their child is either failing or has committed a serious infraction in many cases. With the new school reforms and the promotion of ‘positive’ parental involvement and choice in Independent Schools this underlying relationship between motivation, performance and parental school involvement should change.

⁶⁸ Rutter M (1985) Family and School Influences on Cognitive Development, *Journal of Child Psychology and Psychiatry*, Vol. 26, (5), pp. 683-704, 1985

performance and work organization as to particular areas of knowledge. Learning how to learn may be as important as the specifics of what is learned” (ibid p.700).

How does the family affect school performance? Most studies in Europe and America try to isolate the effect of parental education, family income and other factors such as events of divorce and separation. For instance, Ermisch and Francesconi (2001)⁶⁹ use longitudinal panel data to establish that parental education level has large independent effects on children’s education. The long-standing US evidence also tends to try and isolate the effect of poverty versus other factors that include family factors. Given that poor educational performance in Qatar appears to be spread across the population and few children, if any, have subsistence incomes or life-styles that approximate to those in US poverty, it is mostly the familial factors that are relevant to stress from such research. Mcloyd (1998)⁷⁰ reviewing the literature finds distinguishable effects from “*verbal interactions between mothers and children, expectations of parents for achievement, positive affective relations between parents and children, and discipline and control strategies.*” (page 193). US studies have also found parenting style as a mediating factor for income poverty to the extent that the amount of emotional support and cognitive stimulation in children's home environments was found to account for one third to one half of the disadvantages in verbal, reading, and math skills. (ibid)

One recent study using a combination of medical, psychometric and social economic longitudinal data reports, “*measures of parents psychological functioning, pre-school care, parental health behaviours, the home learning environment and the physical home environment can account for around one third of the cognitive income gradients (differences in cognitive ability related to household income) but 50 to 60% of the flatter mental and physical health outcome gradient*” (Washbrook, Propper and Gregg 2008 p. 30)⁷¹.

Parental involvement in their children’s learning has been found to positively affect academic performance in both primary and secondary schools (Fan & Chen, 2001⁷²; Feinstein & Symons, 1999)⁷³, leading to higher academic achievement, greater cognitive competence, greater problem-solving skills, greater school enjoyment, better school attendance and fewer behavioural problems at school (Melhuish, Sylva, Sammons et al., 2001)⁷⁴.

The literacy performance of children has in particular been linked to familial learning. As stated earlier, early reading experiences with their parents prepare children and parental involvement in their child’s reading has been found to be the most important determinant of language and

⁶⁹ Ermisch J and Francesconi M (2001) Family Matters: Impacts of Family Background on Educational Attainments, *Economica* Vol 68, pp. 137-156

⁷⁰ Mcloyd V (1998) Socioeconomic Disadvantage and Child Development, *American Psychologist*, February pp 185-204.

⁷¹ Washbrook E, Propper C and Gregg P (2008) *Understanding the Relationship between Parental Income and Multiple Child Outcomes: a decomposition analysis*, CMPO Working Paper No. 08/193, Bristol: The Centre for Market and Public Organisation (CMPO) University of Bristol.

⁷² Fan, X. & Chen, M. (2001). Parental Involvement and students’ academic achievement: A meta-analysis. *Educational Psychology Review*, 13, 1-22.

⁷³ Feinstein, L. & Symons, J. (1999). Attainment in secondary school. *Oxford Economic Papers*, 51, 300-321.

⁷⁴ Melhuish, E., Sylva, C., Sammons, P., Siraj-Blatchford, I. & Taggart, B. (2001). *Social, behavioural and cognitive development at 3-4 years in relation to family background. The effective provision of pre-school education*, EPPE project. DfEE: London: The Institute of Education.

emergent literacy (Bus, van Ijzendoorn & Pellegrini, 1995)⁷⁵. Parents who introduce their babies to books give them a head start in school and an advantage over their peers throughout primary school (Wade & Moore, 2000)⁷⁶. But later parental-child reading activities at home have significant positive influences on reading achievement, language comprehension and expressive language skills (Gest, Freeman, Domitrovich, & Welsh, 2004)⁷⁷ and on pupils' interest in reading, attitudes towards reading and attentiveness in the classroom (Rowe, 1991)⁷⁸.

Parental involvement in literacy practice was found to be more important than inherited family background variables, such as income, family size and level of parental education (Flouri & Buchanan, 2004)⁷⁹. Early parental involvement in such children's literacy practices leads to larger and longer-lasting effects (Mullis, Mullis, Cornille et al., 2004)⁸⁰. Reading at school is the most sensitive to parental influences (Senechal & LeFevre, 2002)⁸¹ and such gains spread to other academic areas (Jordan, Snow & Porsche, 2000)⁸².

We must have some hesitancy in applying such findings unequivocally to Qatar but there is sufficient evidence of high quality to show how important family effects are on both school performance and wider cognitive outcomes in order to raise serious concerns over the absence of such evidence in Qatar and the 'invisibility' of such effects in the policy debate on school performance.

It is recommended that a large investment in research is made into family effects on educational performance and on general social and cognitive well-being and the general integration of family-based and formal education inputs into measuring educational outcomes and performance.

Current School Performance

Qatar's school students perform very poorly in internationally comparable tests, completely at odds with Qatar's status as a high income country. 2007 was the first time that Qatar participated and thus there is no trend data. In tests for Mathematics and Science (Trends in Mathematics and Science Study - TIMSS) Qatari student at 4th and 8th Grade were placed either last or one but last in the international rankings for Maths. Science tests at both grades gave the same performance results. Reading skill tests at 4th Grade (PIRLS) showed Qatar performing well relative to other Arab states but very poorly compared to European and Asian countries. Finally, 2007 PISA test scores for

⁷⁵ Bus, A.G., van Ijzendoorn, M.H. & Pellegrini, A.D. (1995). Joint book reading makes for success in learning to read: A meta-analysis of intergenerational transmission of literacy. *Review of Educational Research*, 65, 1-21

⁷⁶ Wade, B. & Moore, M. (2000). A sure start with books. *Early Years*, 20, 39-46

⁷⁷ Gest, S.D., Freeman, N.R., Domitrovich, C.E. & Welsh, J.A. (2004). Shared book reading and children's language comprehension skills: the moderating role of parental discipline practices. *Early Childhood Research Quarterly*, 19, 319-336.

⁷⁸ Rowe, K. (1991). The influence of reading activity at home on students' attitudes towards reading, classroom attentiveness and reading achievement: An application of structural equation modelling. *British Journal of Educational Psychology*, 61, 19-35.

⁷⁹ Flouri, E. & Buchanan, A. (2004). Early father's and mother's involvement and child's later educational outcomes. *British Journal of Educational Psychology*, vol. 74, 141-153.

⁸⁰ Mullis, R.L., Mullis, A.K., Cornille, T.A., Ritchson, A.D. & Sullender, M.S. (2004). *Early literacy outcomes and parent involvement*. Tallahassee, FL: Florida State University.

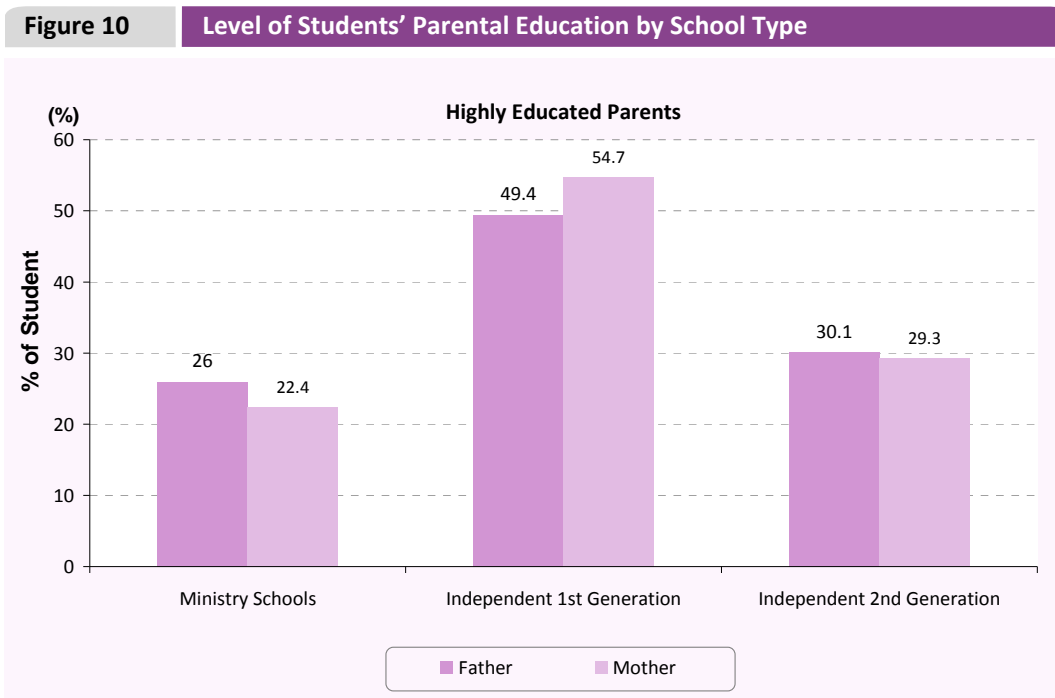
⁸¹ Senechal, M. & LeFevre, J. (2002). Parental involvement in the development of children's reading skill: A five-year longitudinal study. *Child Development*, vol. 73, no 2, 445-460.

⁸² Jordan, G.E., Snow, C.E. & Porsche, M.V. (2000). Project EASE: The effect of a family literacy project on kindergarten students' early literacy skills. *Reading Research Quarterly*, 35, 524-546.

15 year olds also showed Qatar performing very badly, ranked one but last in both reading scores and mathematics, but with big differences between better performing girls and very poorly performing boys.

Schooling in Qatar prior to reform was of very poor quality. A 2001 study “found that many of Qatar’s students were retained in their same grade each year and that most secondary school graduates were unprepared to enter selective post-secondary institutions or science- and technology-related jobs. The inability of the education system to meet the nation’s human resource needs stemmed from a number of problems, including the absence of a coherent vision of education goals; a hierarchical organizational structure within the Ministry of Education; an outdated curriculum that focused on rote memorization; lack of innovation in the classroom; no authority to make decisions at the school level; no systematic appraisal of student outcomes” (Brewer et al., 2007)⁸³.

Reform will promote better governance, provide school level organisational incentives, sponsor parental involvement, improve pedagogical practice in the classroom and thus improve standards. The first groups of schools have left Ministry of Education status and become Independent Schools but remain fully government funded. Recent evaluation data shows that the first group of schools that opted for /were chosen for Independent status had particular social characteristics in some respects. The students had parents that were more highly educated on average.



Source: Table B1 Zellmen et al (2009)⁸⁴

⁸³ Brewer D., Augustine C., Zellman G., Ryan G., Goldman C., Stasz C., and Constant L. (2007) *Education for a New Era: Design and Implementation of K–12 Education Reform in Qatar*, Santa Monica, Calif.: RAND Corporation

⁸⁴ Zellman G., Ryan G., Karam R., Constant L., Salem H., Gonzalez G., Orr N., Goldman C., Al-Thani H. and Al-Obaidli K (2009) *Implementation of the K-12 Education Reform in Qatar’s Schools*, Doha: Rand-Qatar Policy Institute.

Figure 10 compares this first group to join Independent School status to the second tranche and to the remainder of Ministry Schools. Taking parents who have both university graduate and post-graduate qualifications together, the proportion of such highly educated parents was highest in the first group of schools. This first group were selected to be the top performing schools and existing semi-independent schools and other schools of high reputation were encouraged to be the inaugural group of Independent Schools (see Brewer et al pp. 134-138). There are good reasons to select the first group of innovators to be better equipped as they can demonstrate the potential for parental involvement in governance, in improved student performance over time most effectively. However, the dangers of this approach are several. It may overstate the 'step change' of moving from MoE to Independent Status in the early years of reform and distort expectations of improvements as the programme rolls out across all schools. It may have more difficulty in cascading benefits down that are applicable to students and parents of lesser abilities. It could make measures of student improvement difficult to interpret over time and between schools – higher performing students prior to reform will potentially have lower rates of improvement post reform from a higher base.

Returning to the measurement of improvement in student performance in schools, then it is not just the 'step-change' of adopting Independent status that is being measured. Indeed, tentative evidence of improvement is emerging over time for the set of students from 2005. These changes should not just be expected of Independent Schools alone as systematic change will influence the performance of other schools alongside their preparation for change of status at some future point. Arabic and English performance shows improvement over the 2005 to 2008 period with some narrowing of differences between poor and better performers (SEC Evaluation Institute 2008)⁸⁵. Interpretation of unequivocal improvement is difficult but nevertheless there is some evidence of gradual incremental improvement over time. Overall, it is much too early to say whether reform has succeeded or not.

The Transition into Work, Vocational and Higher Education

Our approach so far to childhood has been based on a linear unidirectional approach to children's development over childhood. But in terms of investment in human capital – and the economic benefits of higher skills and qualifications to Qatar and its population - then we should not just rely on these supply side factors. If we return to the diagram in **Figure 1** then it is time to look at the large downward arrow that represents the demand for and incentives to qualify and train. It is the contemporary profile of economic returns to skills and qualifications that is the primary factor in deciding current perceptions of the 'value of education' (apart from those who value the pursuit and gaining of knowledge as of intrinsic value). There seems a general consensus that there are large structural problems of incentives to qualify at post-secondary level (and for boys, the low incentives to qualify at secondary level) due to the segmented and subsidised labour market that leads to most Qataris working for government agencies (in clerical and administrative roles, or in the uniformed services).

⁸⁵ SEC Evaluation Institute (2008) Qatar Comprehensive Education Assessment (QCEA) 2008 Summary of Results, PowerPoint presentation only – available to download from http://www.english.education.gov.qa/section/sec/evaluation_institute.sao/qcea

However, while there is a general agreement of the overall problem, there are some real problems in profiling and understanding the actual 'returns to education' beyond wage levels themselves. Wage levels are normally set by economic principles in a private labour market, but Qatar does not have a normal labour market. Qataris have access to what can be termed as a 'social allocation of employment'. This results from the decision to promote Government employment as an integral part of a Qatari welfare state funded by oil and gas-based economic growth. Some thirty years ago, decisions put in place to build post-1970's economic and social development promised, '*automatic employment in the public sector for Qatari secondary and University graduates*' (Gonzalez et al, 2008 p.78), which was only formally removed in 2002. This 30-year old promise of public employment was part of a larger settlement a distribution of oil revenues that '*distributed much of the proceeds to Qataris in the forms of subsidies for petrol, water, and electricity; free primary, secondary and post-secondary education; access to free health care; and generous employment benefits for those working in the public sector, including salary based on years of schooling, a plot of land, and an interest-free mortgage to build a house on that land.*' (ibid p 63).

Today's public employment, whether in direct Government service or in the Government-owned oil and gas and other enterprises is not just an expectation but has evolved to provide low-risk, moderately paid employment with low efficiency and low expectations of those who take it up. Alongside such employment are generous subsidies included in salary structures – especially linked to housing, home ownership and marriage - that ensure that it is the preferred destination for those in early adulthood who face marriage and family building expectations from their parents and wider family. Performance in work is largely not rewarded, as many appointments and promotions are determined by familial, tribal other social and political affinities. Training exists but does not lead to higher wages in the main – wage differentials are mostly determined by length of tenure and appointment. Poor performance is not addressed in a meaningful way – those dismissed continue to be paid and await re-deployment. Generous pensions are provided after just 20 years of service. The natural result of this is that, "*Qatari nationals overwhelmingly work for the government. This is largely because employment in the civil service is used as one of the key ways for the government to distribute the nation's oil wealth among Qatari citizens. In sharing that wealth the government has established considerable benefits for civil service jobs. An unfortunate and perhaps unintended consequence of this policy, however, is the almost complete absence of Qataris from the private sector*" Berrebi et al (p 435)⁸⁶. Qatar follows other Gulf States in this approach, "*In effect, employment in government jobs is another form of the social welfare system put in place by the ruling elite in the resource-rich Gulf countries.*" (Gonzalez et al 2008 p. ix)⁸⁷

Unemployment occurs on entry to public employment – but primarily due to delay in entering Government service for high school graduates but also for women who qualify for post-graduate entry (often in education) and have longer periods of waiting. Youth post-secondary unemployment in Qatar primarily consists of a group of young people who are at the end of the queue waiting to be allocated a Government job.

⁸⁶ Berberic C., Martorell F. and Tanner J. (2009) Qatar's Labor Markets at a Crucial Crossroad, Middle East Journal Vol 63, (3) pp 421-442

⁸⁷ Gonzalez G., Karoly L., Constant L., Salem H. and Goldman C (2008) *Education and Labor Market Initiatives in Lebanon, Oman, Qatar, and the United Arab Emirates*, Santa Monica: Rand Qatar Policy Institute

Private employers can mostly not compete with such levels of wages and low expectations of performance. Higher wages in the finance sector do operate but private employers are also less willing to offer specific times of work and separate female work environments that are the norm in Government jobs. *“Many private sector employers noted that expatriate workers are more cost-effective than Qatari workers for three reasons. First, Qataris expect to be paid what the government would pay them and to work the government’s shorter working hours. Second, Qataris often need extensive English language or specific on-the-job training to be effective in positions with private employers. Large companies are known to provide in-house English training or pay for a Qatari’s education abroad. And, third, Qataris sometimes “job hop,” leaving a company that has invested in their training to work for another company once training has been completed. Expatriate workers, in contrast, may not leave their job or the country without the expressed consent of their employer”.* (Gonzalez et al p. 52)

But it is important to look at non-wage related returns to education that operate alongside the public employment guarantee. The reality of how the real gains and rewards of employment are perceived for men lies in their total income portfolio that includes other income in addition to their Government employment. The rules on majority Qatari ownership of any business (51%) produces what is known as the “silent partner” phenomenon, with many Qataris (men) achieving significant additional incomes through simple rent-seeking opportunities that require little risk and little effort. Additionally, the widespread “work permit trade” based on fees chargeable by Qatari nationals (men) to ‘sponsor’ immigrant labour has risen hugely following the large numbers of low skilled migrants that have accompanied the recent period of booming growth. Investment income is also rising as the gains from these and other economic activity are invested in stock-markets and other forms of perceived high return investments. This form of additional economic business alongside Government employment is common across Gulf States. It means that the ‘return’ from low demand Government jobs is much more than the underlying wage. It also means that an alternative private employer would demand more from their Qatari employee and leave less time and opportunity for out of work business and investment activity.

Simple assumptions on wage returns of Government employment are also a poor proxy for returns to education because Government posts at all levels are seen as a ‘status good’ by many and are subject to social allocation and patronage through familial, clan, and other social factors that reflect the overall allocation of opportunity in Qatar society that is described as *“centralized, often personalized, decision-making, the lack of accountability and transparency, and a reliance on patronage networks — continue to remain intact and are widely practiced”.* (Kamrava (op-cit) p.403)

Reform of employment to produce a more economically efficient labour market that is able to reward investment in qualifications and skills thus faces significant structural problems that are political as well as economic. There are clear economic steps that can be taken to improve the ability of an emerging true labour market to reward skills, and these include equalisation of ‘social subsidies’ in wages across private and public sectors and the promotion of more efficient and transparent system of transfers. Such options are discussed later.

Attitudes to Employment

Having identified such structural impediments to change and to better rewards for qualification it is also necessary to see if attitudes among Qataris are changing to value education more highly.

Parental attitudes of school students are surveyed as part of the QCSS Parent Questionnaire element of the Supreme Education Council Evaluation Institute's suite of evaluation measures of school performance. However, it is difficult to interpret the results as, even at primary level, over 70% answer that they want their children to achieve post-graduate university level (masters degree or above) and a further 17% answer at graduate university level (SEC Evaluation Institute 2008 p. 89⁸⁸). It is not clear whether this reflects a choice of the 'top band' answer as a proxy for wanting "the best" for their children or whether it is formed on the necessary qualification level for the career of choice or any level of income associated to that career choice. Recent research based on population surveys in Qatar warns, "it is recognized that this population is 'questionnaire naïve' and there may be an art involved in responding to questions" (Sandridge et al 2010 op-cit p.71). Better data from parents based on a clearer set of questions about perceived returns and investments from their children's education would assist in clarification.

There is a greater range of available data on student attitudes, and in particular, of secondary student attitudes and of young people who have left school. The QCSS Student Questionnaire, administered in the classroom through a paper-questionnaire to each student, also shows very high aspirational levels for university graduate and post-graduate qualification (75% of all students) but overall a lower level than parental aspirations discussed above. There is some evidence of the aspirations of post-graduate university qualification falling between preparatory and secondary students, perhaps reflecting adapted preferences arising from better information and reflection on ability and rewards. But interpretation of such data is again difficult, other than to report that students report high qualification aspirations in highly aggregated terms. There is no ability to assess how far these reflect the potential 'test' effect of a classroom questionnaire, no ability to assess how far such aspirations reflect knowledge of what such qualification means in terms of costs and consequences (especially at primary level), and no ability to assess how far perceived gains from over-stating aspirations in order to maintain a school record that will, in part, potentially affect chances of gaining sponsorship for the highest form of qualification – a degree or post-graduate study abroad.

The RAND Qatar Policy Institute also undertook qualitative studies to look at educational and occupational preferences as part of a review of post-secondary education (Stasz et al 2007⁸⁹). Two groups were sampled, a group of 260 secondary school seniors in 2006 and a survey of school graduates from 1998 (n=75). These surveys sought to provide "*insights into the reasons behind education and employment choices and aspirations. Understanding what individuals value when making decisions about education and work can help policymakers craft the incentives that will be effective in increasing educational pursuits toward high-demand occupations*" (p 33). A simple ranking of their responses provides some insights into clear cultural clustering of family and religious factors that influence plans for qualification but also shows that personal interests and job availability are important. However, this data does not allow us to consider how these factors inter-relate. Would advice from progressive parents outweigh more conservative religious constraints on girls, for instance? How far are personal interests adapted to parental or religious influences and by

⁸⁸ SEC Evaluation Institute (2008) *Schools and Schooling in Qatar 2007-2008: A statistical overview of aspects of schools and schooling in Qatar*. Doha: SEC Evaluation Institute.

⁸⁹ Stasz C., Eide E and Martotell F. (2007) *Post-Secondary Education in Qatar: Employer Demand, Student Choice and Options for Policy*, Doha: Rand-Qatar Policy Institute.

job market perceptions? While a simple descriptive ranking is of some use, a clearer indication would come from looking at the inter-relationship and trade-offs between such factors – for instance by using factor analysis or similar techniques.

Perceived job characteristics for this same group of 2006 school seniors resulted in the top third rankings (6 out of 18 characteristics) all concern individual preferences (apart from a desire for ‘mixed gender work environment’ that is very difficult to interpret⁹⁰). Status is also hugely important – both in the direct question about external perception, ‘prestige’, and in the question that asks about similar characteristics from the perspective of self-reflective worth, ‘makes me feel respected and appreciated’. These findings reinforce the perception of employment being a ‘status good’ as discussed earlier. However, economic factors are also prominent. Both the wage level and tenure of jobs are seen as high in importance. It is clear that the preferred responses cluster around characteristics that are Government jobs. Indeed, there are a range of other characteristics that would also cluster in this way – on occupational benefits and work hours.

Turning to older samples of people who have completed school, RAND Qatar’s study also sampled 1998 school graduates. However, comparison with the younger cohort is difficult as this is a small and selective sample (of those with work experience) and it is clear that family life, and in particular, the events of marriage and childbirth, will heavily influence responses to actual experience of qualification and employment as these people are now aged 26 or thereabouts. The same set of job characteristics preferences that were asked of school seniors were asked of this group. Their perceived advantages of job characteristics are different from their younger peers. Individual level considerations about job advancement and training are more prominent. Job security, salary and housing benefits can all be reasonably interpreted as stemming from the needs of having a home and a family (the difference in ranking of housing benefits between men and women indicate this may be the case). Again, many of the survey responses are difficult to interpret. The issue of mixed gender work environment has fallen to the lowest priority but this may not actually reflect a difference in importance per se as it may just be reporting that women (in Government jobs in the main) have already had this issue settled (i.e. it may no longer be seen as important because it is an assumed characteristic of their actual, previous or envisaged job). The most positive finding from this evidence is the clear preference for on the job training and career advancement. And this evidence is borne out in other survey evidence from the College of North-Atlantic-Qatar (CNAQ)⁹¹.

This survey has a larger sample of a much wider population, incorporating any who responded to a purposive sampling of shopping malls and of school seniors in six participating schools. The evidence from this survey showed that respondents were seeking the highest salary possible, together with other occupational benefits. This meant that the Oil and Gas sector were preferred for school seniors and the employed, while those engaged in post-secondary education preferred the financial sector and related.

⁹⁰ It scores highly as ‘very important to extremely important’ but it is not clear that it can be assumed to be a negative preference (that this is a characteristic to be avoided, in particular for women) strongly mediated by religious and family preferences shown earlier to be paramount in factors in the earlier tabulations. Indeed, other responses to ‘women only work environment’ seem to be counter-intuitive in relation to earlier data from the same group and with responses to the other question.

⁹¹ College of the North Atlantic-Qatar (2008) *Training for The Future: Report on Occupational Interests of Qatari Nationals and Needs of the Labour Market in the State of Qatar*, Doha: College of North Atlantic-Qatar.

We record the job characteristics reported as ‘very important’ in this CNAQ survey in **Table 3** and highlight the top five (out of 12 characteristics) for men and women. Clearly, pay, hours of work and status are preferred, together with status and separate female facilities for women.

Table 3		Preferred Job Characteristics				
n=1,436	% Female	Female ranking	% Male	Male ranking	% overall	Overall ranking
Good pay	74%	1	70%	1	72%	1
There are two days off per week	61%	2	50%	4	55%	2
The status of job in the community	55%	5	54%	3	54%	3
Not having to work split shifts	61%	3	48%	5	53%	4
Separate facilities for men and women	58%	4	45%	8	51%	5
A pension plan	44%	9	56%	2	51%	6
The status of the job to the family	51%	6	48%	6	49%	7
The start and end time of work day	50%	7	44%	9	47%	8
The work day is not more than 8 hours	48%	8	43%	10	45%	9
Private hospital benefits	36%	11	48%	7	43%	10
The job is close to home	38%	10	29%	11	33%	11
Transportation is provided	26%	12	22%	12	24%	12

Source: CAN-Q (2008) p 22.

Notes: those answering “very important”, ranked by overall ranking

Table 4		Factors Preferred for Job-related Training				
	% Female	Female ranking	% Male	Male ranking	% Overall	Overall ranking
My salary rose as my level of certification got higher	69%	2	66%	1	67%	1
My salary rose as my work experience grew	71%	1	63%	3	67%	2
My training was certified	66%	4	66%	2	66%	3
Training certification could be credited towards Higher Education	68%	3	63%	4	65%	4
My salary increases were based on good performance	66%	5	59%	5	62%	5
I could get credit for skill learned on the job	66%	6	54%	6	59%	6
My pension was based on my years of experience and my salary	48%	7	53%	7	51%	7
I could work up to become a manager	40%	8	48%	8	44%	8
I was paid to train before working	27%	9	32%	9	30%	9
I was released from work to get more training	23%	10	30%	10	27%	10

Source: CAN-Q (2008) pp 26-27.

Notes: those answering “very important”, ranked by overall ranking

When asked what training and development opportunities were important in *any* (rather than actual or experienced) employment, this same sample were clearly able to appreciate the rational economic returns from qualification and experience rather than more conditioned expectations of what current jobs could provide in terms of payment for training and time off to do it. **Table 4**

shows the rankings and levels of preference. However, when this same group were asked to select their preferred eight jobs from a list of recent and current vacancies then the same level of interest for the top five jobs was seen across the whole group, independent of gender, educational status or level: office manager, computer support technician, administrative assistant and process technician in gas and oil industry.

This study clearly demonstrates an unmet demand for vocational training in-work based on what can be hoped are clear rational economic returns to such training. However, it also clearly shows that wider concerns for social status and the current state of the employment opportunities in Qatar do not reflect this in the main.

Overall, there is thus some evidence for a shift in attitudes to education and training – although we are unable to compare to earlier data for an exact estimation of such a shift. This finding concurs with discussions in Doha in November 2009 with a variety of stakeholders.

4. Conclusions & Initial Recommendations

This report is the result of a brief visit to Doha in November 2009 and a series of meetings with a small group of policy makers and service providers. The material from this brief and non-comprehensive visit to stakeholders in child well-being was then given longer consideration of international academic and policy research on how child well-being could be approached in Qatar, in particular to the issue of improving human capital investment. This report is designed to introduce policy stakeholders to a wider view of the potential of child focused policy in Qatar; to look beyond the strict boundaries of policy provision and Ministerial or Supreme Council allocation of policy tasks to view things in a strategic and holistic way. As such the policy audience is viewed as a broad one rather than focused on a single executive body that could bring such diverse approaches together.

First, let us return to the two aims of this paper:

- To provide a fuller and more detailed outline of how a policy approach based on child well-being could assist Qatar in developing its 2030 Vision and to map out early headlines
- To illustrate how currently perceived problems in the educational performance and labour market structures could be interpreted and addressed using the approach of child well-being.

First, the Qatar National Vision 2030 aims encompass fundamental changes to social and human development that are to be achieved in a single generation. To achieve them, today's youngest children must experience a policy environment that promotes their optimal social and human development. The current system clearly does not in many ways. Too much emphasis may have been placed on single areas of reform, for example in the school system. Adopting a wider remit acknowledges that such single theme approaches are *necessary but not sufficient*.

Second, Qatar has much to be proud of in its programmes for children and this has been recognised by the United Nations Council for the Rights of The Child in 2009 when they considered Qatar's most

recent report on progress⁹². The development of internationally consistent measures of child well-being can assist Qatar in placing itself in the context of high income developed countries and Qatar should aim to adopt at least one of the OECD or UNICEF High Income Countries models for measuring child well-being. A brief review of evidence in Parts 2 and 3 of this paper have looked at elements of such indicators such as low income and divorce but has also looked wider at more areas where data is scarce and or incomplete. At this early stage, the OECD six-domain measure looks most promising but this requires confirmation.

But Qatar should approach the issue of child well-being measurement on the basis of its own needs to develop policy to reach the goals set by the Qatar National Vision and should have its own set of particular measures of cultural and social relevance that meet the criteria to reach this vision. This need will mean wider and deeper analysis than that required for international measurement and comparison.

It is recommended therefore that a systematic evidence review be undertaken of a wide range of health, education, familial, attitudinal and other data build a profile of both perceived elements of child well-being, to profiles risks and develop policy needs and eventual evaluation databases. The aim of such systematic review is to identify gaps and to assess how far existing data collection approaches in the Supreme Council for Family Affairs, The Evaluation Institute and other partners in the Supreme Education Council, The Qatar Statistics Authority, the Permanent Population Committee, the researchers at the Hamad Medical Corporation and other stakeholders are covering the ground, duplicating or missing important elements of child well-being.

At times during this report, specific recommendations have been made about data and evidential gaps. These will not be repeated here. However, the issue of ill-health and disability has arisen across Parts 2 and 3 of this report repeatedly. The current approach to defining disability as 'special needs' seems to be unnecessarily restrictive given the high risk of significant levels of mild disability that arise from the high prevalence of consanguineous marriage in Qatar. The high likelihood of missing significant areas of need, particularly in mild learning and cognitive disability early in childhood using such an approach is of real concern for Qatar's aim to invest heavily in human capital through education, qualifications and skills.

New survey data also needs to be commissioned- but to do so with strategic aims related to child well-being in mind. This means that both cross-sectional data needs and longitudinal profiling should be uppermost in mind. A panel study of children can enable today's cross-sectional concerns to be collected in the first wave but with the underlying needs of a longitudinal study in mind. A further recommendation is thus that this panel study be designed to oversample new births to have sufficient size to represent a representative birth cohort longitudinal survey that is large enough to withstand long-term attrition. This birth cohort should be designed to collect medical, psychometric, anthropometric data alongside economic and social data in order to have a clear theoretical and analytically robust framework for understanding causal developments over childhood and beyond. A

⁹² See CRC/C/QAT/CO/2 – Concluding Observations of the Committee on the Rights of the Child 52 Session – 14th October 2009.

model for such an approach is suggested in the Avon Longitudinal Study of Parents and Children (ALSPAC) or similar study.

However, there is already longitudinal data being produced as part of the SEC Evaluation Institute's Qatar National Education Data System (QNEDS). Data in QNEDS are from the student, parent, teacher, and administrator surveys, as well as from the QCEA administered each year by the Evaluation Institute. We recommend that panel data be linkable to QNEDS through the MOI individual population identifier and that an early priority of improvement of QNEDS be the collection of better familial and medial background data to assist in interpreting changes in educational performance of the current cohort of school students.

It is obvious at this point that discussion has slipped into the second of the two aims of this paper – to show how an approach to child well-being can be incorporated into and inform the investment in human capital and educational and labour market performance. At this point we move to make policy recommendations. However, it is not possible at this point to make detailed policy prescriptions but only to suggest ways of realignment and restructuring of policy.

Policy recommendations begin with a realignment of policy to prioritise investment in human capital based on child well-being in the youngest age groups. Currently, school-aged children and those in higher education dominate educational priorities and the returns from such investment will be poor without additional refocusing on infancy and early years. At a high and strategic level a clear and consistent series of incremental reforms has to be put in place that alters the overall policy balance towards the developmental and longer-term needs of today's youngest child cohort.

This suggests areas of potential new investment in expanded provision for those youngest children through improved Early Years Services. Such services should include improved preventative primary healthcare and developmental services for all children:

- Regular developmental check-ups and monitoring
- Qualified home health visitor service for first 6 -12 months for all children and mothers
- Improved services for early recognition and treatment of developmental disorders
- Longer maternity leave.

The second major area for policy reassessment is in family policy. Such policy development has to be carefully approached as the family is seen as a private sphere where public policy should intervene only where necessary. Nevertheless, policy should aim to improve family health and learning environments. Main areas for such an approach are:

- Preventative public health programmes aimed to minimise risk of genetic endogamy
- Improved breastfeeding practice
- Improved parenting practice in early childhood through assisted parenting and post-natal health promotion activity.
- Regulation of domestic servants and their role in domestic childcare with the move to impose minimum standards for those employed to provide childcare. Sponsorship rules and

incentives for foreign domestic servants and childcare workers/nannies should be reformed to promote higher employment standards and best practice in provision of care for children in the home

- Improving parentally initiated home learning environments with highest preliminary priority on improving parental involvement in reading
- Improving wider health and dietary and educational outcomes for children through healthy living promotion in families.

The third area of policy reform should promote such family based policy through a systemic change in the current set of social subsidies for families. These are mostly the wage subsidies for housing and family allowances and other payments made to Qatari government employees. The basis for such a change would be to move from a system based on wage and price subsidies towards a transparent system of family allowance transfers that were available across private and public employment on a 'citizenship' basis for all Qataris. This would assist in underlying labour market reform to potentially allow underlying wage rates to reward skills and education across public and private sectors by removing social subsidies that currently disproportionately favour public sector employment.

The design of such family transfers should be weighted to give most for early years, and conditions of entitlement for such transfers should be reviewed to look at conditionality attached to the promotion of good familial incentives for child outcomes as outline above.

Such a system of comprehensive family allowances could also promote vocational and higher education if older children were incentivised to stay in education post 16 through individual learning transfers that moved payment to them on completion of terms of education rather than merely to their parents. Such provision could eventually be additionally accompanied by change to raise compulsory school/training age to 18. Such a move should be accompanied by changes to recruitment practice into Government service of any kind (including MOI police and Armed Forces) to ensure minimum standards of qualification – for instance, High School graduation or equivalent vocational qualification.

Overall, the design of such a system of comprehensive transfers should do most to promote human capital development and child well-being.

Of course, such an approach omits how to alter wage structures to ensure rewards for education, training and qualification, in other words to put a modern labour market in place. The World Bank's recent review of education across Arab and North Africa⁹³ clearly demonstrates how such incentives are crucial to educational reform and success alongside institutional reform in the delivery of education services in schools and in public accountability. Labour economists are better placed to advise on this and implementation of the existing areas of labour market and civil service reform put forward by the World Bank and by RAND in earlier reports should be brought forward.

⁹³ World Bank (2008) *The Road Not Travelled: Education Reform in the Middle East and North Africa*, Washington DC: The World Bank.

All in all, these conclusions suggest a very wide encompassing framework for a review of both evidence and policy towards child well-being. The potential workload that results from these is considerable and needs to be addressed at a high executive level of policy makers in Qatar. Ideally, the research and the policy development tasks should be co-ordinated. What is currently in place that can be amended to promote a co-ordinated approach to these two tasks?

On research, then the National Priorities Research Programme of the Qatar National Research Fund has a current priority for research funding for projects that *'build human capital in Qatar'* and we suggest that a key priority for such research funding is to set up a co-ordinated theme of research activity that uses both single research projects and longer term surveys in order to fill current gaps in knowledge and set up the medium term evidence base to focus on child-wellbeing and policy development.

On policy, the Qatar National Vision 2030 clearly has the broad policy aims set out clearly and what is needed is a short to medium strategic plan to re-orientate current policy programmes towards such aims. Our suggestion would be to concentrate on the early years of childhood and develop different integrated programmes to promote healthy optimal child development in infancy using a combination of parental and familial based interventions backed up by services based in primary healthcare and social facilities. Second, there is now sufficient evidence from many sources to clearly show what is wrong with Government employment in Qatar – its extent, its wage and opportunity structures and its subsidies. What this paper has further demonstrated is how these can affect the human capital development of today's children. There is only one generation of children to influence more positively before Qatar has to live according to its 2030 vision of itself.

Today's policy makers, today's government employees and today's parents all have to be part of tomorrow's vision and have the responsibility to change and understand how the costs and consequences of these changes will benefit the next generation in time for 2030.

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Appendix 1.

Suggested further studies for GSDP assessment and incorporation into discussion.

Health and Family Survey 1998

Qatar Child Health Survey 1991

Disability Survey 2008

Abdulhameed Ismail Al-Ansari (undated) Matrimonial delay and divorce in the gulf society” - causes and solutions...a contemporary reading, Journal of the Gulf and Arabian Peninsular Studies (Kuwait University)

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Meetings Undertaken in November 2009

Ibrahim Al-Naimi, Chair of Outstanding Schools Oversight Committee, Supreme Education Council

Ms Enid Strickland, Interim President, CNA-Q

RAND-Qatar Policy Institute (RQPI)

Mr Faisal Muhammad Al-Emadi Director of National Workforce Development, Ministry of Labor

Dr. Eddie Denning (Managing Director) Ms. Sameera AL-Qassimi (Deputy), Shafallah Center for Children with Special Needs

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