The psychological impact of T1D on glycaemic control in affected Saudi children at different developmental age groups

<u>Amir Babiker^{1,2},</u> Mona El Rashid^{1,2}, Aban Bahebri², Mohamed El Ahmedi², Hala Gasim^{1,2}, Ahmed H. El Rasoul³, Maralyn Druce⁴, Simon Coppack⁴, Nasir Al Jurayyan^{1,2}

¹Paediatric Endocrine division, ²King Khalid University Hospital and King Saud University, Riyadh, Saudi Arabia, ³ Roscommon County Hospital, Roscommon, Ireland, ⁴Queen Mary University, London, UK.

NOTHING TO DISCLOSE

INTRODUCTION	OBJECTIVES
 T1D: is the 3rd commonest chronic disease of childhood. In newly diagnosed patients, adaptation to a new life is usually a challenge for the whole family. Specific challenges posed by T1D on the affected children, 	 To assess the correlation between children's HbA1c and the psychological impact of T1D on affected Saudi children and their parents at King Khalid University hospital, Riyadh, Saudi Arabia. To explore variations if any between children and their

 The correlation between HbA1c and age specific psychological challenges, to our knowledge, has not been previously explored in the Middle East. groups, in the psychological impact scores of different age aspects of the disease and its management.

METHODS

- Cross sectional pilot study at KKUH, KSA (October-December 2013). A standard quality of life diabetes specific questionnaire for children (PedQoL DM[™] V3.0 Arabic translation) was used.
- The total and individual impact scores of different domains in the questionnaire were calculated from children's and parents' responses. Data were analyzed using Pearson's correlation, ANOVA and t-2 tests

		RESUL	LTS							
Table 1 – Patient gender and average HbA1c per age gender	oup Table 2 – Compari	isons of the mean HbA1c of different ag	Table 3 – Comparison between the questionnaire individual categories' aggregate scores of parents and children at different developmental age groups							
GenderMaleFemale5 to 747	Comparing	g mean HbA1c of different age groups	P values	Comparisons of impact scores	Statistical analysis	DM Aggregate	T1 Aggregate	T2 Aggregate	Worries Aggregate	Communication Aggregate

		12	15			THE J dy	e groups logerrer	0		hildren (All age	P values – ANOVA	0.24	0.36 0.	95 0.22	0.30
1	3 to 18	10	15			0				roups)					2022
T T	otal (%)	26(41.3)	37(58 7)			5-7 vr	s with 8-12 vrs	- 0	006861 Pa	arents (All age	P values – ANOVA	0.21	0.88 0.	35 0.61	0.70
Av	erage HbA1C	20(41.0)	01(00.1)	-		J -1 yi	5 WIUT 0-12 yrs		.000001 1 c	roups)					
	-			_		5 7 vro	with 12 10 um		5.	- 7 (Children Vs	P values - t2 test	0.93	0.09 0.	57 0.12	0.43
	ge Group	Mean	Median			o-7 yrs	s with 13-18 yrs		J.UUZZY	arents)					
5	to 7	9.427273	9.9						8 -	-12 (Children Vs	P values- t2 test	0.47	0.94 0.	57 0.08	0.69
8	to 12	11.84444	11.7			8-12 yr	s with 13-18 yrs	0	.501182 Pa	arents)					
13	3 to 18	12.212	12.5						13	3 – 18 (Children	P values - t2 test	0.88	0.56 0.	48 0.32	0.40
A	ll Ages	11.56825	11.6						Vs	s Parents)					
										M= Diabetes Mellitus,	P= Parents, T1= Treat	ment 1, T2= Treatme	ent 2		
	ummany of D	Jaaraan'a aar	relations of th	a coorea of	he nevehele	alaal imnaal	t on ohildron	Table F	Summoni of	Deersen's es	relations of (the searce of	the nevels	logical impo	at an naranta
ible 4 - 5	ummary of P	earson's con	relations of th	e scores or	the psycholo	gical impact	t on children	Table 5 -	Summary of	Pearson's co	rrelations of (the scores of	r the psycho	logical impa	ct on parents
s childre	n's HbA1c							Vs childre	en's HbA1c)						
	Statistical	Total	LDM	1 74	1 70	1 Manual and	0						1 70		
ge group	Statistical	Total	DM	111	12	worries	Communication	Age	Statistical	Total	DM	11	12	Worries	Communicatio
ge group	analysis	Aggregate	Aggregate	Aggregate	Aggregate	Aggregate	Aggregate	Age	analysis	Aggregate	DM Aggregate	11 Aggregate	Aggregate	Aggregate	Aggregate
ge group 7 yrs	analysis Pearson's r	Aggregate -0.10	Aggregate 0.001	Aggregate - 0.118	Aggregate -0.40	Aggregate	Aggregate 0.28	Age 5-7 yrs	Statistical analysis Pearson's r	Aggregate 0.27	DM Aggregate -0.29	Aggregate 0.33	Aggregate 0.32	Aggregate 0.12	Aggregate 0.51
ge group 7 yrs	analysis Pearson's r P value	Aggregate -0.10 0.77	Aggregate 0.001 0.10	Aggregate - 0.118 0.729	Aggregate -0.40 0.217	Aggregate -0.039 0.91	Aggregate 0.28 0.41	Age 5-7 yrs	Statistical analysis Pearson's r P value	Total Aggregate 0.27 0.43	DM Aggregate -0.29 0.39	0.33 0.33	Aggregate 0.32 0.34	Aggregate 0.12 0.73	Communicati Aggregate 0.51 0.11
7 yrs 12 yrs	analysis Pearson's r P value Pearson's r	Aggregate -0.10 0.77 -0.04	Aggregate 0.001 0.10 -0.10	Aggregate - 0.118 0.729 -0.13077	Aggregate -0.40 0.217 0.12	worries Aggregate -0.039 0.91 -0.11	Communication Aggregate 0.28 0.41 0.03	Age 5-7 yrs 8-12 yrs	Statistical analysis Pearson's r P value Pearson's r	Total Aggregate 0.27 0.43 -0.14	DM Aggregate -0.29 0.39 -0.057	Aggregate 0.33 0.33 -0.24	Aggregate 0.32 0.34 -0.22	Worries Aggregate 0.12 0.73 0.14	Communicati Aggregate 0.51 0.11 0.25
7 yrs	analysis Pearson's r P value Pearson's r P value	Aggregate -0.10 0.77 -0.04 0.84	Aggregate 0.001 0.10 -0.10 0.62	Aggregate - 0.118 0.729 -0.13077 0.515601	Aggregate -0.40 0.217 0.12 0.54	worries Aggregate -0.039 0.91 -0.11 0.58	Communication Aggregate 0.28 0.41 0.03 0.87	Age 5-7 yrs 8-12 yrs	Statistical analysis Pearson's r P value Pearson's r P value	Total Aggregate 0.27 0.43 -0.14 0.50	DM Aggregate -0.29 0.39 -0.057 0.78	Aggregate 0.33 0.33 -0.24 0.22	Aggregate 0.32 0.34 -0.22 0.26	Worries Aggregate 0.12 0.73 0.14 0.48	Communicati Aggregate 0.51 0.11 0.25 0.20
7 yrs 12 yrs 3-18 yrs	analysis Pearson's r P value Pearson's r P value Pearson's r	Aggregate -0.10 0.77 -0.04 0.84 0.84	Aggregate 0.001 0.10 -0.10 0.62 0.01	Aggregate - 0.118 0.729 -0.13077 0.515601 0.2	Aggregate -0.40 0.217 0.12 0.54 0.22	worries Aggregate -0.039 0.91 -0.11 0.58 - 0.08	Communication Aggregate 0.28 0.41 0.03 0.87 0.075	Age 5-7 yrs 8-12 yrs 13-18 yrs	Statistical analysis Pearson's r P value Pearson's r P value Pearson's r	Total Aggregate 0.27 0.43 -0.14 0.50 -0.05	DM Aggregate -0.29 0.39 -0.057 0.78	I1 Aggregate 0.33 0.33 -0.24 0.22 0.05	Aggregate 0.32 0.34 -0.22 0.26 -0.23	Worries Aggregate 0.12 0.73 0.74 0.48 0.37	Communication Aggregate 0.51 0.11 0.25 0.20 0.39
7 yrs 12 yrs	analysis Pearson's r P value Pearson's r P value Pearson's r P value	Aggregate -0.10 0.77 -0.04 0.84 0.84 0.02 0.91	Aggregate 0.001 0.10 -0.10 0.62 0.62 0.01 0.94	Aggregate - 0.118 0.729 -0.13077 0.515601 0.2 0.34	Aggregate -0.40 0.217 0.12 0.54 0.22 0.3	worries Aggregate -0.039 0.91 -0.11 0.58 -0.08 0.69	Communication Aggregate 0.28 0.41 0.03 0.87 0.075 0.72	Age 5-7 yrs 8-12 yrs 13-18 yrs	Statistical analysis Pearson's r P value Pearson's r P value Pearson's r	Total Aggregate 0.27 0.43 -0.14 0.50 -0.05 0.83	DM Aggregate -0.29 0.39 -0.057 0.78 -0.29 0.17	I1 Aggregate 0.33 0.33 -0.24 0.22 0.05 0.8	Aggregate 0.32 0.34 -0.22 0.26 -0.23 0.28	Worries Aggregate 0.12 0.73 0.73 0.48 0.48 0.37 0.07	Communication Aggregate 0.51 0.11 0.25 0.20 0.39 0.05
7 yrs 12 yrs 13 yrs	analysis Pearson's r P value Pearson's r P value Pearson's r P value Pearson's r	Aggregate -0.10 0.77 0.77 0.84 0.84 0.91 0.91 0.04	Aggregate 0.001 0.10 0.62 0.01 0.94 -0.13	Aggregate - 0.118 0.729 -0.13077 0.515601 0.2 0.34 -0.05	Aggregate -0.40 0.217 0.12 0.54 0.22 0.3 -0.11	worries Aggregate -0.039 0.91 -0.11 0.58 - 0.08 0.69 -0.12	Communication Aggregate 0.28 0.41 0.03 0.87 0.87 0.72 0.72	Age 5-7 yrs 8-12 yrs 13-18 yrs All age	Statistical analysis Pearson's r P value Pearson's r P value Pearson's r P value	Total Aggregate 0.27 0.43 -0.14 0.50 -0.05 0.83 -0.21	DM Aggregate -0.29 0.39 -0.057 0.78 -0.29 0.17 0.17	I1 Aggregate 0.33 0.33 -0.24 0.22 0.05 0.8 -0.05	Aggregate 0.32 0.34 0.26 -0.23 0.28 -0.2	worries Aggregate 0.12 0.73 0.14 0.48 0.37 0.07 0.07 0.06	Communicati Aggregate 0.51 0.11 0.25 0.20 0.39 0.39 0.05

CONCLUSIONS

Identifying age specific challenges in children with T1D may help focusing on relevant areas of concern in their management. Larger studies may be required to better highlight the relationship of these challenges with HbA1c in affected Saudi children.