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Intelligence - Emotional or Cognitive; Which Needs More Attention in Children? - A Short Term Study

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1. Introduction

It is rightly said that "*A High IQ will get you through school, A High EQ will get you through life".*

'IQ' which has often been used to measure intelligence, attempts to tap one's cognitive capacity and functioning. Emotional intelligence (EI) involves the ability to carry out accurate reasoning about emotions and ability to use emotions and emotional knowledge to enhance thoughts. It expands the ability to evaluate one's general or overall intelligence.[1]

Emotion awareness consists of individual differences in the way people differentiate, express, analyze, and pay attention to their own and others' emotions. Emotion awareness appears as an important feature of emotional Intelligence.[2]

Behaviour is always a function of a person and the situation. The characteristics of an individual's behaviour always occur in a situational context, the perception of which is in turn dependent on the emotional intelligence, which has invaluable applications in Pediatric dentistry. [3]

In this study the self awareness aspect i.e.ability to recognize & understand personal moods &emotions & drives, self regulation i.e. ability to control/ redirect disruptive impulses and moods, to think before acting is considered.

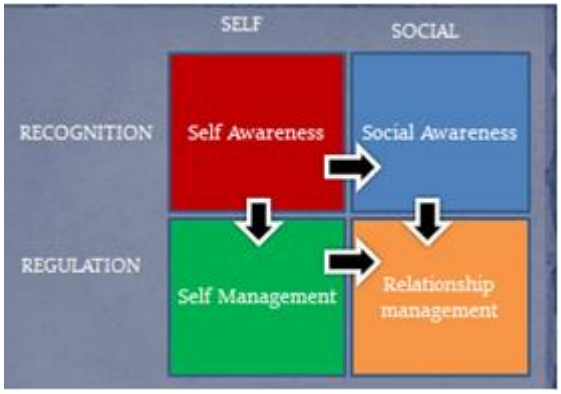

Figure 1: Components of emotional and intelligence quotient

Aim

The aim of the study was to evaluate the two components of emotional intelligence –self awareness and self management of emotions along with the related intelligence quotient.

2. Materials & Method

It was a questionnaire based study and the various sets of questionnaires were divided into following:

1) Questionnaire for self awareness of Emotions[5] (Translated Version from English to Hindi)
2) Questionnaire for Self management of Emotions[5] (Translated Version from English to Hindi)
3) Raven's colour Progressive matrices test [4]

2.1 Methodology

The Present study was carried out in Pediatric Patients reporting to the Department of Pediatric & Preventive Dentistry. Prior to the study 50 children were interviewed out of which 39 children were selected for the questionnaire. A Prior permission and informed written consent of parents and/or primary health care providers and/or care takers was taken before the interview.

Two groups were formed namely group A and B respectively. Children of different ageformulated the two groups.
Group A: children in the age group of 8 to 10 years
Group B: children in the age group of 11 to 14 years.
Two questionnaires were used for evaluating two emotional intelligence components.
Raven's colour progressive matrices test was used for evaluation of Intelligence Quotient

Inclusion Criteria

- Patient/Parents willing to participate in the study
- Age of child between 8 – 14 years

Exclusion Criteria

- Patient/Parents Not Willing To Participate In The Study

- Patients Who Did Not Complete The Questionnaire/ Were Disinterested In Filling It
- Any Systemic Disease/ Mentally Disabled Child

Scoring Criteria

The scoring criteria for questionnaire were kept as following:

0- 60 = Low self-awareness/ self-management
60-120 = Moderate self-awareness/ self-management
120-180 = High
180-240 = very high

The scoring was done and children were categorised into 3 scales:

- 120 – 140= HIGH SELF AWARENESS . Great! You already know quiet a bit about your feelings.
- 60- 120= MODERATE SELF AWARENESS . You are aware- but can still train yourself further to learn more about your feelings.
- 0-60= LOW SELF AWARENESS . You can soon learn to be aware of your feelings.

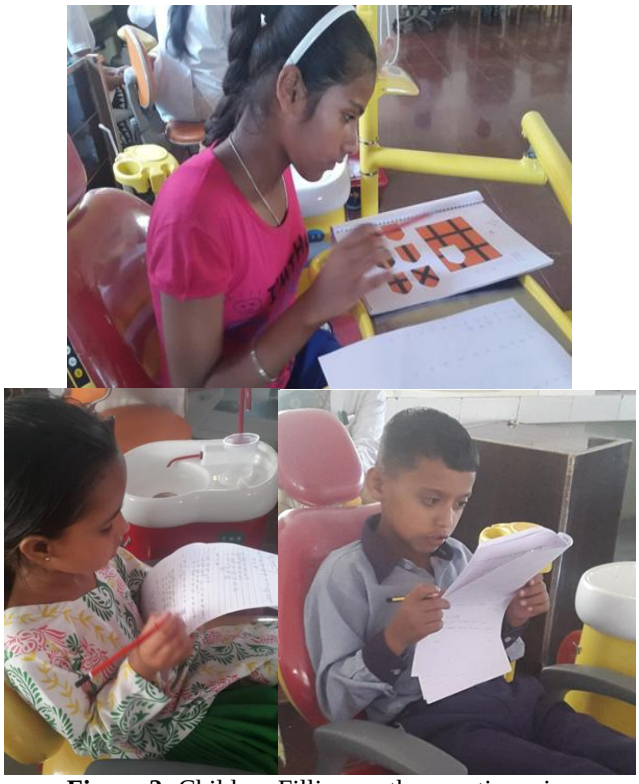

Figure 2: Children Filling up the questionnaire

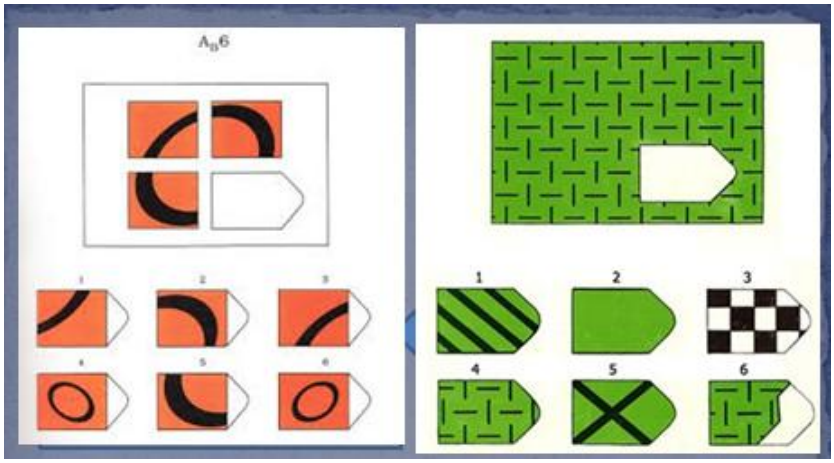

Figure 3: Raven's coloured progressive test

Table 1: The Questionnaire

SELF AWARENESS QUIZ	
1. When I am Sad I feel like a) A balloon before it pops. b) A clown who can't smile. c) A flower that needs watering. d) A mouse that's hiding from a cat.	
2. When I am Sad I feel a) Cold inside. b) Empty & hollow. c) Like jumping up & down. d) Like yelling & hitting	
3. When I am angry I feel like a) Balloon before it pops. b) Clown who can't smile. c) Rat mouse on a wheel going nowhere. d) Tall & beautiful flower. 4. When I am angry I feel a) Out of control. b) Like hugging the whole world. c) Mad. d) Cold inside.	
5. When I am frightened I feel like a) A clown who can't smile. b) A quivering jelly on a plate. c) A tall & a beautiful flower. d) A mouse that's hiding from a cat.	
6. When I am frightened I feel a) Like jumping up & down. b) Like running away. c) Out of control. d) Unable to move.	
7. When I am envious & wish I had what someone else has I feel like a) A green eyed monster all twisted up inside. b) A mouse on a wheel going nowhere. c) A tall & beautiful flower. d) Poisonous snakes coming out of my mouth.	
8. When I am envious & wish I had what someone else has I feel a) Empty & hollow.	

b) Like saying bad things. c) Mad. d) Unable to move.	
9. When I am bored I feel like a) A balloon before it pops. b) A clown who can't smile. c) A mouse on a wheel going nowhere. d) A tiger pacing his cage.	
10. When I am bored I feel a) Cold inside. b) Mad c) Heavy & sluggish. d) Like running away.	
11. When I feel guilty I feel like a) A coin that's nothing worth anymore. b) A tall & beautiful flower. c) A rotten apple in the fruit bowl. d) A mouse that's hidden from cat.	
12. When I feel guilty I feel a) I am a bad person. b) I have failed & everyone knows. c) like jumping up & down. d) d. out of control.	

3. Result & Discussion

The responses to the questionnaire was assessed by a single individual.

Based on the responses the following observations were made:

a) In the age group of 8 to 10 years, the total number of participants were 19. Out of the 19 , 12 had an IQ of >90 and 7 had an IQ of <90. Out of the 12 participants with IQ >90, 8 (66.6%) had a very high emotional awareness and 4 (33.3%) had a high Emotional awareness. In 7 participants with IQ<90, 5 (71.4%) had a high Emotional awareness and 2 (28.5%) had a moderate Emotional awareness. Statistical analysis with Chi square yielded a value of 9.45 and the P value obtained was 0.0089. (Table 2)

Table 2: Results in the age group of 8-10 years about distribution of self emotional awareness score in patients with different IQ range

Total N=19	Very High EA		High EA		Moderate EA		Chi-square	P-Value
	N	%	N	%	N	%		
IQ>90 (n=12)	8	66.6%	4	33.3%	-			
IQ<90 (n=7)	-		5	71.4%	2	28.5%	9.45	0.0089*

b) 6(50%) out of the 12 participants with an IQ >90 had a very high emotional management and 6 (50%) had a high emotional management. All 7 participants with IQ<90 has a high Self management (100%). The Chi square analysis yielded a value of 5.12 with a P value of 0.0773. (Table 3)

Table 3: Distribution of self emotional management scores in patients with different IQ range in age group 8 to 10 years.

Total N=19	Very High EA		High EA		Moderate EA		Chi-square	P-Value
	N	%	N	%	N	%		
IQ>90 (n=12)	8	50%	6	50%	-			
IQ<90 (n=7)	-		7	100%	-		5.12	0.0773

Children with high IQ(above avg) are more self aware& hence may take directions more effectively. IQ is more significantly related to Emotional awareness in younger age group of 8-10 yrs in comparison to 11-14 years group .Management techniques eg : TSD & Voice control – more effective in Younger pts.

c) In the age group of 11 to 14 years , total participants were 20 in number out of which 14 had an IQ >90 and 6 had IQ<90. 6 out of the 14 with IQ>90 had a very high self emotional awareness score i.e.42.8% and 8 (57.1%) had a high Emotional awareness. In the IQ<90 range , 4 (66,6%) had a high Emotional awareness and 2 (33.3%) had moderate Emotional awareness. The Chi square value was 7.3 and P value of 0.026.(Table 4)

Table 4: Results in the age group of 11-14 years about distribution of self emotional awareness score in patients with different IQ range

Total N=20	Very High EA		High EA		Moderate EA		Chi-square	P-Value
	N	%	N	%	N	%		
IQ>90 (n=14)	6	42.8%	8	57.1%	-			
IQ<90 (n=6)	1		4	66.6%	2	33.3%	7.3	0.026*

d) In the age group of 11 to 14 years , 4 out of the 14 with IQ>90 had a very high self emotional management score i.e.28.5%, 8 (57.1%) had a high Emotional awareness and 2(14.2%) had a moderate emotional management score. In the IQ<90 range , 1 (16,6%) had a very high Emotional awareness, 4 (66.6%) had a high emotional awareness and 1 (16.6%) had moderate Emotional awareness. The Chi square value was 0.32 and P value of 0.8521.(Table 5)

Table 5: Distribution of self emotional management scores in patients with different IQ range in age group 11 to 14 years

Total N=20	Very High EM		High EM		Moderate EM		Chi-square	P-Value
	N	%	N	%	N	%		
IQ>90 (n=14)	4	28.5%	8	57.1%	2	14.2%		
IQ<90 (n=6)	1	16.6%	4	66.6%	1	16.6%	0.32	0.8521

Self management seems to be independent of IQ i.e even if someone has IQ below avg ; he/she may be able to manage his emotions.

4. Conclusion

Children of younger age group(8-10 years) with high IQ – have better awareness of their emotions & hence establishing a communication will be easier in Pediatric dental office.With increasing age –children with below average IQ ; learn to manage their emotions more effectively may be because of learning behavioural skills & hence communication & behaviour management may be easier in pediatric dental office.

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