

THE ROLE OF THE PSYCHOLOGICAL FACTOR IN PAEDIATRIC DENTAL MANAGEMENT

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Abstract. Aim. The present study was aimed to emphasise the role of psychological factor in establishing of an effective and efficient relation and communication between child patient and paediatric dental practitioner as well as to perform a correct individualization of the behavioural and therapeutical management techniques. **Material and methods.** The present study is an integrative part of an interdisciplinary mixed pilot study carried out on a number of 88 subjects (54 girls and 34 boys) aged between 6-8 years old, from two Iași school communities, with the following structure: 64 subjects normal from psycho-mental viewpoint and 24 subjects with audio sensory disabilities. In reasoning of the proposed aim, we have performed a complex assortment of investigations: projective draw test (thematic projective test), Raven's progressive matrix test and questionnaire. **Results.** The thematic projective draw test illustrated for the normal subjects group: rounded draw outlines, light harmonious colours, an integrative systemic aspect. For the subjects with disabilities it showed: the lack of integrative aspect, affective liability, intrinsic variable personality demodulation, an austere reflection of the ambient environment, etc. It was found a significantly correlation between the IQ level and the conduct manifested by child ($r=-0.857$, $p<0.01$, 95%CI). Evaluation of the risk proportion (Chi-square test) revealed that in an unfavourable family environment, the risk for developing an abnormal conduct was 11.8 times higher ($\chi^2= 49.5$, $p<0.01$, 95%CI). **Conclusions.** The paediatric dental practitioner must approach the child patient (normal or with audio sensory disabilities) in the intricacy of its problems and determinatives, using a large range of clinical and para-clinical investigations contributing to the perfectly paediatric dental - behavioural and therapeutical, preventive, interceptive and curative management **Key words: child, disability, management, thematic draw, Raven progressive matrix test**

Rezumat. Scop. Studiul de față a avut drept scopuri: sublinierea rolului pe care îl are factorul psihologic în stabilirea unei relații și a unei comunicări efective și eficiente între pacientul copil și medicul stomatolog pediatru; individualizarea corectă a tehnicilor de management comportamental și terapeutic. **Material și metoda.** Studiul de față este parte integrantă dintr-un studiu pilot mixt interdisciplinar, întreprins pe un număr de 88 subiecți (54 fete, 34 băieți), cu limite de vârstă 6-8 ani din două comunități școlare din Iași, cu următoarea structură: 64 subiecți normali (psihico-mental) și 24 subiecți cu dizabilități senzoriale auditive. În argumentarea scopului propus s-a utilizat o gamă complexă de investigații clinice și paraclinice: testul proiectiv al desenului (testul proiectiv tematic), testul matricelor progresive Raven și chestionarul. **Rezultate.** Testul proiectiv tematic a ilustrat pentru subiecții normali psihico-mental: contururi grafice rotunjite, culori deschise armonioase, un aspect sistemic integrativ. Pentru subiecții cu dizabilități testul a ilustrat: absența aspectului integrativ, labilitate afectivă, demodulare intrinsecă variabilă a personalității, reflectare austeră a mediului ambiant, etc. S-a constatat existența unei corelații semnificative între nivelul IQ și conduita comportamentală manifestată de copil ($r=-0.857$, $p<0.01$, 95%CI). Evaluarea raportului de risc (testul χ^2) a relevat faptul că, într-un mediu familial nefavorabil, riscul de a dezvolta o conduită anormală

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este de 11,8 ori mai mare ($\chi^2= 49.5$, $p<0.01$, 95%CI). **Concluzii.** Practicianul stomatolog pediatru trebuie să abordeze pacientul copil (normal psiho-mental sau cu dizabilități senzoriale auditive) ținând cont de complexitatea problemelor și determinantelor sale, utilizând o gamă largă de investigații clinice și paraclinice care să îi permită optimizarea managementului stomatologic pediatric – comportamental și terapeutic, preventiv, interceptiv și curativ.

Cuvinte cheie: copil, dizabilitate, management, desen tematic, testul matricelor progresive Raven

INTRODUCTION

Child dental management differentiates so much from the viewpoint of the clinical and technical appearances of the established procedures, but especially from psycho-behavioural view point, fact that particularize the inter-human relation and the therapeutical conduct in this field of reference (1, 2).

In paediatric dental practice often it is used the verbal or non verbal communication. Non verbal, multi-sensorial communication as an integrative part of inter-human communication can be an extremely efficient way to direct and shape the behaviour in paediatric dentistry. The most important thing is that the patient most receive the message given by dental practitioner. The factors that influence the communication between paediatric dentist and little patient may have a psychic, emotional, family or even social character. The family and school promote a certain educational and cultural model that influences in different ways each human being, depending on every person's psycho-mental characteristics (3, 4).

MATERIAL AND METHOD

The present study is an integrative part of an interdisciplinary mixed pilot study carried out by the Paediatric

Dentistry Department, Faculty of Dental Medicine, U.M.F. "Gr.T. Popa" Iași, in the period 2001-2006, on a number of 88 subjects (54 girls and 34 boys) aged between 6-8 years, from two Iași school communities, with the following structure: 1st group – 64 subjects (72.7%) normal from psycho-mental viewpoint (40 girls, 24 boys) from "Carol I" School Iași; 2nd group – 24 subjects (27.3%) with audio sensory disabilities: (14 girls, 10 boys), from "Scoala Ajutatoare Pavelcu" Iași (fig. 1).

The investigation was conceived on units that were totally from institutional point of view, school classes constituting the community of our subjects.

In reasoning of the proposed aim, we have performed a complex assortment of clinical and para-clinical investigations, as followings:

- clinical evaluation of the hygienic status;
- psychological and psycho-sociological investigation:
 - functional inquiry;
 - questionnaire;
 - interview;
 - test of progressive matrix Raven;
 - drawing test
 - and selective inter-clinical and radiological investigations.

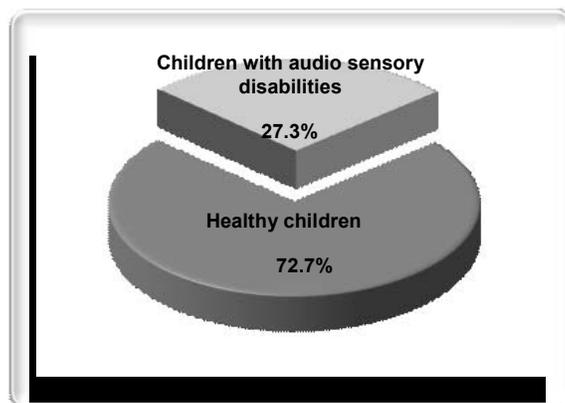


Fig. 1. The structure of the studied population

In the present paper we have considered exclusively the practical significance (in our area of reference) of the child imagistic projection, respectively the projective draw test – having in view the thematic projective test, the Raven's progressive matrix test and the questionnaire.

The method of exploring the child's projection, personality and cognitive psychological or relational existential universe follows the subjects' states, reactions, its life experiences, its essential confrontation with the world and his universe in vision of sense or concrete situation in which manifests. Thus there have been highlighted its own internal subjective structures, its tendencies, interests, aspirations, attitudes, conflicts, thinking pattern, life experiences and externalization of those, the temperament, as well as their bio-social and cultural universe (2, 4).

RESULTS

The selective approach of the group aged 6-8 years was motivated by the

special relevance of this childhood period for the psycho-mental, intellectual behavioural and educational evolution of the child, with long term implications (5). In the study sample, the cases distribution depending on children's age was normal; the mean age value was $7.1 \pm 0.8SD$ years (fig. 2).

The choose of the group of children with disabilities (2nd group) wasn't done for reflecting the discrepancy of the projective conduct, but for highlight the subject's psycho-existential relational universe in a determined concrete context: the pupil – dental office – paediatric dental practitioner (medical staff) relation. The degree of children's disabilities manifests in principal by deregulations of the relations of adjustment at the environment and at the socio-cultural standards, as a consequence of an intellectual, sensorial and behavioural deficit (2, 7).

Concerning the 1st group from our study sample (clinical normal children group), there was noticed that the subjects had a normal existential

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universe, coming from well organized families, with a small number of members, with normal, warm,

affective and totally reciprocal interpersonal relations.

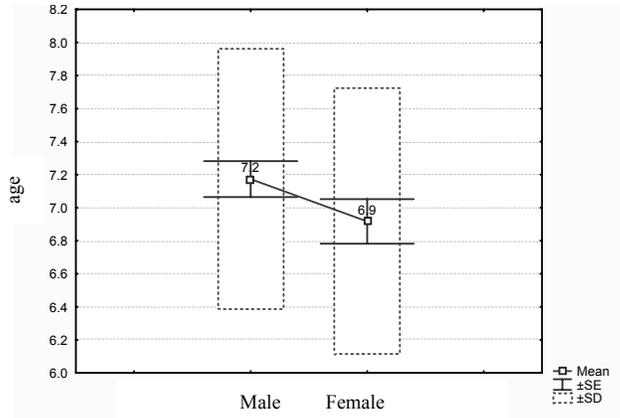


Fig. 2. Mean age according to on subjects' gender

The questionnaires has revealed that the majority of the subjects from the 1st group were coming from intellectual families (85.9%) and the others (14.1%) from functioners and workers families (fig. 3), as compared with the subjects from the 2nd group,

that were 91.7% coming from functioners and workers families and only 8.3% from intellectual families (fig. 4). The family environment origin of children could influence their behaviour at the dental office.

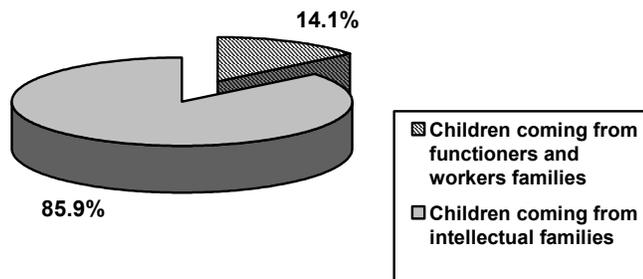


Fig. 3. The study of 1st group by family origin

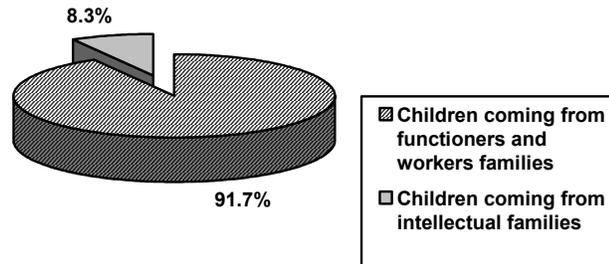


Fig. 4. The study of 2nd group by family origin
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In all 1st group families, there do exist and are promoted cultural, behavioural and value attitude models. In this context, the image of dental office and the one of dental practitioner is not distorting and is not associated with the coercive-educational functions.

The Projective Draw Test illustrated:

- in 1st group with normal clinical subjects (fig. 5):
 - rounded draw outlines;
 - light harmonious colours;
 - an integrative systemic aspect;
 - a slight over dimension of the dentist – that is seen as a protector and a person that heals and has some magic powers;

- decay risk factors in antithesis with sanogenic factors, etc.

- in 2nd group with subjects with audio sensory disabilities:

- from the viewpoint of graphic expressivity: excessive over dimensioning, sharpened, dour graphic outlines;
- the lack of integrative aspect;
- affective liability;
- intrinsic, variable personality demodulation;
- an austere reflection of the ambient environment;
- poor imagistic projection (from the content viewpoint), etc.



Fig. 5. "Dental office"

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There can mentioned a psycho-mental and psycho-sociological universe, determined by personal possibilities (intelligence tests and socio-metric tests), normally, stimulating, our subjects manifesting themselves as becoming human personalities, with slight tendency to autonomy, but having more accented the individual traits, slight integrative, contracting relatively quickly the group relations

but also in the same time, the interpersonal ones (6).

The affinity table allowed the evaluation of children conduct depending on their social environment. A normal conduct was especially recovered at normal children (81.3%), while an inadequate conduct was recovered in children with audio sensory disabilities (fig. 6).

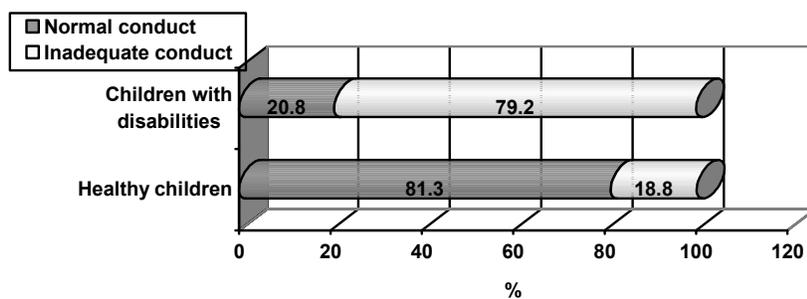


Fig. 6. Cases distribution according to the subjects conduct

A general view on their iconographic mental projection highlights the unit of human being as a bio-psycho-social entity, by which the man remains as unquestionable part of its natural and social environment.

After the interpretation (qualitative and quantitative) of the Raven progressive matrix test, the subjects were framed in intelligence categories. Thus, it could be concluded that (fig. 7):

- for the 1st group subjects (clinical normal children): 45.4% had a superior intelligence level, 26% had an intelligence over medium level and 28.6% medium intelligence level;
- for the 2nd group (children with audio sensory disabilities): 33.3% had medium intelligence level,

23.3% had an intelligence under medium level and 43.4% a slight mental disability.

In the 2nd group there were subjects that presented in different degrees deregulation of the adapting relation to the world, to her/his environment, intellectual attitudinal, behavioural and sensorial dissonances. All these were in interrelation with the level and the coefficient of intelligence development (IQ) (7, 8).

Structuring this group on the base of psychological tests of IQ determining, has resulted that 83.2% had limits or liminar intellect (IQ=70-79) and 16.8% had slight mental disability (IQ= 59-60).

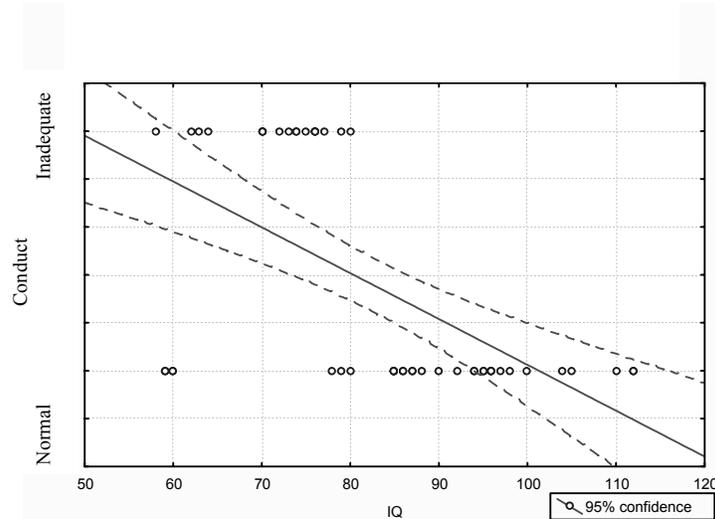


Fig.7. IQ vs conduct type (regression line)

The projection by draw of the subjects with disabilities showed (as it was mentioned before) their cognitive, affective and the behavioural deficit, limited capacity of social adjustment and relations with the environment, the states of affective lability and sometimes of anxiety, hiperemotion or harshness, the lack of sensibility to the

reaction around her/him, to others opinions and attitudes, selfishness, intolerance, distrust in peers (2).

As it was expected, there was a significantly correlation between the IQ level and the behavioural conduct manifested by child ($r=-0.857$, $p<0.01$, 95%CI) (fig. 8).

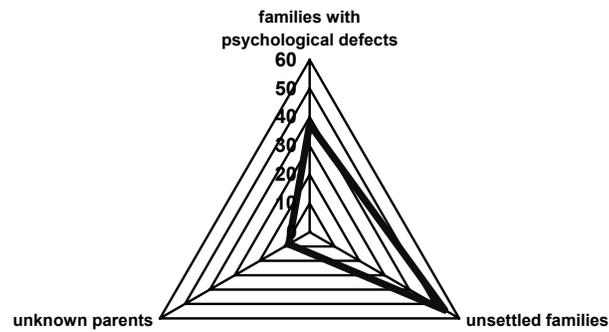


Fig. 8. Structure of the 2nd study group according to family status

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The subjects with higher IQ level presented a normal conduct. In some cases we had to deal with a certain personality disorder, with multiple and diverse deviations from normality, especially in its cognitive – moral dimensions, caused by insufficient intellectual and emotional development of this age stage.

The family environment of the children with disabilities was structured as it shown in figure 9 (37.5% families with psychological defects, 54.2% unsettled families, 8.3% from unknown parents, children institutionalized at birth).

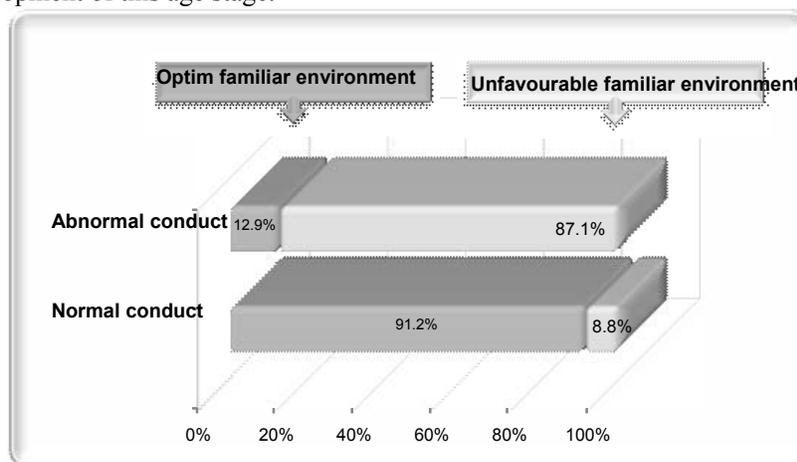


Fig. 9. The subjects structure by family environment

Analyzing from prospective viewpoint the results of the Chi-square test, by evaluation of the risk proportion it was shown that in an unfavourable family environment, the risk for developing an abnormal conduct was 11.8 times higher ($\chi^2= 49.5$, $p<0.01$, 95%CI). The category of subjects that were poor by their bio-genetically structure, having an existential, social, moral and cultural abnormal universe, manifested particularities first of all in the capacity of reflection, perception and idealization of the world and secondly in the one of objectification of externalizing of this, of the relations

ensemble, in which her/him exists and becomes.

CONCLUSIONS

The projective draw test (thematic draw), Raven progressive matrix test and questionnaire revealed the subjects and their families' psychosocial level, the subjects' intelligence coefficient, the manner in which the child patient perceives the dental office in its entire complexity. The results of all test showed an increase of the child fear status during dental treatment. Thus the finality of using all these complementary methods consists

in setting up an individualized protective therapy along all treatment stages.

The thematic draw test revealed the child capacity of imagistic objectification – by draw and colour – of the socio-medical dental environment, in all its particularity, but in the same time in its unity: dental office, paediatric dental practitioner, dental nurse, child patient and the "suffering organ" or the "organ" that is inspected by the specialist: the tooth.

The paediatric dental practitioner must approach the child patient in the intricacy of its problems and determinatives, using a large range of clinical and para-clinical investigations that contribute to the perfectly to paediatric dental behavioural and therapeutical, preventive, interceptive and curative management.

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