EMOTIONAL DEVELOPMENT

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INTRODUCTION

Emotions are complex psychological & biological responses consisting of subjective feelings, physiological reactions & expressive behaviors to int. & et. Stimuli. Expressiveness → bodily movements by facial expressions & vocalizations. Latin word **"emovere"** means **"to stir up/agitate/excite"** Emotional development represents huge variation according to age, maturity, intellectual development, temperament, experience, family background, cultural background, etc. Influencing child development & underlying emotions → ability to cope up with dental treatment

DEFINITIONS

Emotion: An effective state of consciousness in which joy, sorrow, fear, hatred or the likes are expressed. A strong feeling state, arising subjectively and directed toward a specific object, with physiological, somatic and behavior components

-Dorland's Medical Dictionary

All around state of the organism marked by increased bodily activity and strong feelings directed to some object

- Kimball Young

Affective experience that accompanies generalized inner adjustment, mental and physiological stirred up states in the individual and that shows itself in his overt behavior

- Crow

IMPORTANCE OF EMOTIONAL DEVELOPMENT

- Better understanding of the child
- Problems of psychological origin
- Deliver dental treatment
- Communication
- Primary & preventive care
- Treatment Planning & execution

PHYSIOLOGY OF EMOTION

Depends on maturation in nervous & endocrine system, Diff. children & adults…cortical immaturity & endocrine output. **At birth** → cortex development completed, frontal lobe immature…unbalanced emotions. **In 2-5 yrs & 11-12 yrs** → adrenaline in blood, highly emotional & outbursts prolonged

Activities of brain Hypothalamus Muscle & internal organs Initiate body changes

Adrenal hormones Preparing the body…**fight/flight response**

TYPES OF EMOTIONS

- Positive emotions - Example- love, amusement, curiosity, joy, happiness, affection, contentment, humor, eagerness, delight.
- Negative emotions - Example-fear, anger, jealousy, hate, sadness, depression

Who influences emotions?

Family relations, Health, School, Society member, Intelligence, Hereditary

How the emotions develop?

Emotions…not present from birth. Like other sector of human personality…have to develop - Spitz (1949). Emotional development – maturation, learning.

Bridge's Chart

It is a chart proposed by, it shows the scheme of , in the chart she gives an account of the approximate age at which the different emotions appear first. Envy – jealously, K.M.Bridges 1931

STAGES OF EMOTIONAL DEVELOPMENT

- ✔ During infancy
- ✔ During Childhood
- ✔ During Adolescence
- ✔ During Adulthood

During infancy

At birth - Begin to learn - cry

SOCIAL & EMOTIONAL DEV.

Depend on parent, Sleep, Undisturbed, Rooting, sucking & swallowing reflexes, Cry is due to hungry, left attended, pain, Startle →loud noise & lights, Generalized excitement and uncontrolled muscle reaction for a Very short time

One month - Smile…spontaneously & respond to parents

SOCIAL & EMOTIONAL DEV.

Cry, turn to mother's breast, Briefly looks at face, Sleeps mostly, Grasp a finger, Quieten/smile response

Two months - Less primitive reactions, range of responses & behavior, Physical maturation + explore, conversations

SOCIAL & EMOTIONAL DEV.

Explore, Sleep less, Stop crying, Differentiate objects, recognize faces, Follows face, Smile & more responsive

Three months

Lot of interest, physical maturation ↑ rapidly, Turns head for sound

SOCIAL AND EMOTIONAL DEV.

Uses sounds to interact, Respond to smile, More oriented and looks mother's face during feeding, Feelings & responses → pleasure, fear, excitement, unhappiness, Awareness of others. Connect what he hear & see

Six months

Awake long, shows like & dislikes

SOCIAL & EMOTIONAL DEV.

Have familiar people, desire to pick, Reserved/afraid to strangers, Preference, Smile at own image and aware of themselves, Look his hands & feet

Nine months

Strong attachment, move around independently, Pleasure playing

SOCIAL & EMOTIONAL DEV.

Clearly distinguish, Fear of strangers, Copy hand clapping…cry for attention, Put hands around, Respond…to name

Twelve months

Stand independently & walk

SOCIAL & EMOTIONAL DEV.

Distinguish diff. members of family, Wave, Within sight & hearing, Obey simple instructions, Copy actions & sounds

Fifteen months

Anxious & apprehensive if physically separated, Curious → environment

SOCIAL & EMOTIONAL DEV.

"You" & "me", sense of "me" & "mine", Angry → toys, show interest in other children and show jealously, emotionally → changeable & unstable, Dressing & undressing

Eighteen months

Children is Egocentric - defiant & resistant, Separate individual

SOCIAL & EMOTIONAL DEV.

Intense curiosity, small household task, Imitate & mimic others, Social emotions → sympathy for hurt, Intense mood swings → dependence to independence, eagerness to irritation, cooperation to resistance.

Two years

Wide range of feelings - linguistic skills & symbols

SOCIAL & EMOTIONAL DEV.

Independent, ask for food, Demand attention & needs met immediately, If scolded → tantrums, Loving & responsible, point → parts of the body, **Possessive** about own toys and role play

Three years

Children - happier & more contended, Physical & emotional control

SOCIAL & EMOTIONAL DEV.

Wait, Use language rather than outbursts, Play – alone & other, start share things, **Affection** → younger siblings, Imaginary fear & anxieties

Four years

Constantly trying to understand world

SOCIAL & EMOTIONAL DEV.

Play- group of friends but have 1 particular friend, Sociable, sense of past & future, Delay in needs, Confident & self-assured, afraid → dark, Turn to adults for comfort

Five years

Level of balance, self-containment & independence, Friendly, willing to talk polite

SOCIAL & EMOTIONAL DEV.

Enjoy separations, Good overall control emotions, show off, group play, Sense of shame and argues with parents

Six-seven years

Children → steadily, more independent & sociable, Peer group inc.

SOCIAL & EMOTIONAL DEV.

Spells rebellious & aggressive, Irritable & possessive, Aware → gender characteristics, enthusiastic for life, Self-critical, give up easily

Factors affecting childhood emotionality

- Health & physical dev.
- Intelligence
- Family
- School atmosphere
- Hereditary factor

Adolescence & adult

Emotion during this stage change, it makes them moody, in very short time they could switch b/w. an adolescent person can undergo lot of stress, we cannot understand him by his overt behavior. They learn to hide their emotions from other, So it is very complex to identify the individual. The social contacts of an individual are more widen. He is related to classmates, elders & young people, emotionally attached heroes, etc. the influence of all these which sharpen their emotions. They develop an integrity about their past, so they become more patient and tolerate any delay in their life circumstances. They can tolerate stress and tensions in various life situations. so they develop a sense of self control. They have a

tendency to consider others feelings and share their emotions to others. Sharing of emotions reaches its peak at this stage.

Social contact expands to neighbours and other social organizations. So they maintain a loyalty towards others. He entered in the world of reality. He becomes aware of his strength & weakness. This awareness reflect in their emotional expressions. Reviewing hopes, it is a period of high expectation for its future, some realistically work hard for it. So they feel a positive emotion in it. Others engaged in day dream, fantasy or remain in illusion. Later they become unrealistic. Develop a feeling of aloneness so they like to be alone in homes. Inc. compassion – develop sympathy & empathy. Can enter into his own feelings & appreciate the feelings of others

Characteristics of commonly seen emotions in a child

- Distress or cry
- Anger
- Fear
- Anxiety
- Phobia

DISTRESS OR CRY

Most common way child expresses fear, Like other emotional manifestations, expression of personality

At birth- Primary emotion, Vigorous body expressions, Hunger, colic or internal cause

At 6 months - Replaced by fussing or vocalization

During preschool - Physical pain, Disappointed by environment

During school years – Pressure outgrow crying habit, dec. rapidly, Till 15 years…seldom

In young adult - Quiet crying in private because of grief/intense emotions

Diff. types of cry seen in children

Asset, diagnosing the behavior, 4 types given by Elsbach, 1963

Obstinate cry

Child → temper tantrum, thwart dental treatment, Loud, high pitched, no lacrimation, Siren-like wail, Belligerent cry, Represents → child's external response…to anxiety

Frightened cry

Accompanied by torrent of tears but no temper tantrum, Convulsive breath-catching sobs, Child emitting this type of cry….overwhelmed by situation

Hurt cry

Loud, More frequent, Accompanied by small whimper, Child → discomfort…single tear….filling….running down cheek, Without sound or resistance…procedure

Compensatory cry

Not a cry at all…no tears, Sound…child makes to drown out the noise, Cry sound → slow, monotone, Coping mechanism…. to unpleasant auditory stimuli, Uncomfortable in situation

Chunawalla YK, Bohari MR

Correlation…crying pattern to clinical diagnosis of children…undergoing trt.,, 100 children; Age 4-9 yrs

- Cries recorded…video camera…diff. cries analyzed

✔ Pain cry → injectable aids

✔ Frightened & compensatory cry → dental drill

(Chunawalla et al. Correlation of crying pattern to clinical diagnosis of children undergoing treatment. Int. journal of contemporary dentistry.2010;11:1)

REFLEXES PRESENT AT BIRTH

- **Moro reflex** - Sudden movement of neck…rapid abduction & extension of arms…opening of hands, Indication of muscle tone…disappear 2-3 months
- **Startle reflex -** Sudden noise/stimulus…elbow flexed & hands remain closed
- **Palmar/Grasp reflex** - Palm stimulate, hand closes, plantar reflex, disappear 24 mon., Strong grasp reflex - cerebral palsy & kernicterus
- **Walking/stepping reflex -** Sole pressed against couch, tries to walk
- **Limb placement reflex -** Leg below knee, arm below elbow, lifts limbs over the edge
- **Asymmetric tonic neck reflex -** Head 1 side, arm extended same side, flexion of contralateral knee, Disappear 2-3 mon - persist in spastic
- **Babinski's reflex** - Stroking of lateral surface of plantar of foot, heel to toe, flexion of toe
- **Parachute reflex -** Appear 6-9 mon. holding child in ventral suspension, suddenly lowering, arms extend, Absent/abnormal → cerebral palsy, asymmetrical → spastic hemiplegia
- **Landau reflex -** Ventral suspension, if head flex, hip, knees & elbow also flex, 3mon-1 yr. absent → hypotonia, hypertonia, severe mental abnormality
- **Tendon reflexes** - Blow upon muscle tendon, Diagnosing cerebral palsy, spastic children → tendon jerks exaggerated
- Abdominal reflexes

- **Facial reflexes** - Nasal reflex, Blink reflex, Doll's eye reflex, Corneal reflex, Pupil reflex
- **Oral reflexes**
- **Rooting reflex** - Infant's cheek contact mother's breast, vigorous sucking movements, Onset: 28 weeks IU, Well-established : 32-34 weeks IU, Disappears : 3-4 months
- **Sucking** - Introducing finger into mouth, Onset- 28 weeks IU, Well-established: 32-34 weeks IU, Disappears : around 12 mon.
- **Swallowing** - Begins – 12 weeks of IU, well established 32-36 weeks IU, Full term babies – sucking & swallowing reflexes

Gag reflex - Protective reflex, 18 weeks of IU, buccal cavity & pharynx, post. 3rd of third. Cry – non conditioned reflex, 21-29 weeks of IU. Mastication – conditioned reflex, learned by irregular & poorly coordinated, chewing movements, Proprioceptive responses → TMJ & PDL → stabilized chewing pattern

DOMAINS OF DEVELOPMENT

Normal dev. →complex process, multitude of facets. It includes gross motor development, fine motor skill development, personal and social development, language, vision and hearing

GROSS MOTOR DEVELOPMENT

Orderly sequence…locomotion → complex task

SUPINE & PULL TO SIT

Control of head & curvature of spine, Newborn → head lags behind & back rounded, 12 weeks → slight head lag, curve dec.20 weeks → complete neck control

VENTRAL SUSPENSION

Held prone…lifted from couch, Upto 4 weeks → head flops down, 6 weeks → horizontal plane, 12 weeks → lift above horizontal plane

PRONE POSITION

Birth/few days → turns head to 1 side, 2 weeks → high pelvis & knees drawn up, 4 weeks → lifts chin, 6 weeks → flat pelvis & extended hips, 12 weeks → face lifted 45 ˚, B/w 4 & 6 mon. roll over…back to side…back to stomach, 8 mon. → crawls, 10 mon → creeps

SITTING

5 mon. → with support, Back rounded….gradually straightens, 6-7 months → independently sits (tripod), 8 months → steady sitting without support , 10-11 months → pivoting

STANDING & WALKING

Six months → bears his weight, 9 mon → holding furniture , 10-11 mon → cruising…around furniture , 12-13 mon → stand independently & walk withheld, 13-15 → walk independently, 18 mon → runs, 2 yrs → walk backwards, 2 yr → climbs upstairs …both feet, 3 yr → 1 foot/step…ride tricycle , 4 yr → hop, 5 yr → skip

FINE MOTOR DEVELOPMENT

Hand eye coordination - B/w 12 & 20 weeks, hand regard, 3-4 mon. hand in midline Immature grasp 6 mon. (palmar grasp), From radial side 8-9 mon, Mature grasp → 1 yr, Pincer grasp

Hand-to-mouth coordination

Six mon. take biscuit & chew, 1 yr, feed self but spills, 15 mon. pick up & drink…without spill, 18 mon. self feed with spoon

ADVANCED HAND SKILLS

Fifteen mon. turns 2-3 pages…scribbles on paper, 18 mon. tower 2-3 cubes, 2 yr unscrew lid, turn knobs, etc. Circular stroke….turn page 1 at time

Dressing

18-30 on. eager to learn, 1st undressing, 1 yr → pull off mittens, caps, socks, 18 mon. unzip…fumbles with buttons, 2 yr → put on shoes, socks, 3 yr → dress & undress

Personal & Social dev.

1 mon. intently watch mother face, 6-8 week…social smile, Spontaneous smile, 3 mon. recognize mother , 6 mon. smile at mirror, Imitates acts, 6-7 mon. stranger anxiety, 9 mon. waves "bye-bye", 1 yr understand simple questions, 15 mon. points to objects 18 mon. simple orders…domestic mimicry, 2 yr point…5-6 familiar objects, 3 yr count, colors, sing rhymes, 4 yr R & L discrimination, 5 yr…identify colors, repeat digits

Language

After social smile…vowel sounds 'ah' 'uh', 5 mon. laugh loud…ah-goo' 'gaga', 6 mon. monosyllables (ba,da,pa) , Before 9 mon. imitates sound & bisyllables, 1st bday…1-2 words

18 on. vocabulary 8-10 words, 2 yr…100 words…sentence, 3 yr…ask questions, knows name

Vision & Hearing

Primary caretakers face…follow moving person/dangling ring…8-10 inches away 45˚

1 mon. → fixates on mother, Grasping 'with the eye' 3 mon. 4 mon. binocular vision, 1 yr → follow rapidly moving object…even small object

Hearing

Newborn respond to sound, 3-4 mon…turn head towards source, Hearing check, 5-6 mon. turn head and down, 10 mon. look at source diagonally.

Adolescence & adult

Emotions…change very frequently & quickly, Moody, b/w being happy / extremely sad

Undergo… stress & strainfull situation, Cannot understand….by overt behavior….learn to hide

Social contacts…widen…influence emotions, Integrity…past experiences & future expectations, Patient & tolerate delay….bearing of emotions → sense of self control, Capacity of sharing emotions, Loyalty expands, Realism in emotional experiences….world of reality…strength & weakness….awareness reflect

Reviewing hopes and aspiration : high expectation, hard work, Tolerance of aloneness, Increased compassion

ANGER

Outburst of emotions….child's lack of skill in handling situations, Infant & young children → direct & primitive manner….violent & symbolic, 15 mon. → throwing objects

2 yr old → attack other children, 4 yr old → begging , 5 yr old → less expression
6 yr old → renewal of violent methods, 7 yr old → less aggressiveness, 8-9 yr → feelings, 10 yr → violent & expressed physically, 12 yr → verbally, 14 yr → anger on someone else

FEAR

Reaction to known danger…essential & inevitable. Source - consciousness

Unpleasant emotion/effect consisting of psychophysiological changes in response to realistic threat/danger to one's own experience

FEAR

One of the primary emotions, infant unaware - nature of stimulus, Tries to adjust, isolated experiences, resorting to flight, .if flight impossible → fear intensified

Fear & rage…primitive responses….from harm & self-destruction

Man → highly developed cortex, control emotions…rationalization & determination

PREVALENCE OF FEAR

Dental fear - **incidence…3-21%.**...depend on age, Girls more because inherent timidity, encourage of display, increased from infancy to childhood. (Chapman et al. Dental fear in children- a proposed model. British Dental Journal 1999;187:408-12)

DEVELOPMENT OF FEAR

AT BIRTH

Primary response….unaware of stimulus, Aware….fear-producing stimuli…adjust/flight Smells & sounds….dentist appearance

PRE-SCHOOLER (2-5 YR)

Fear of separation, abandoned….left alone, animals, Frankl….children<50 mon. benefited…presence of mother ….>50 mon. no diff. in behavior (Frankl S.N. the effects of separation and Nonseperation of the mother and the pre school child in the dental office. Thesis, Tufts University, Jan 1961)

Pt. brought by parents…comfort & reduce fear, **4 yrs**...peak of definite fears....4-6 yrs...gradual decline, Fear of stranger...lost....broad association, Children raised on farm...shy & diffident, Intelligent children...display more fear, Boys → aggressive & adventuresome...girls → reserved

EARLY SCHOOLER

Fear → dark, staying alone…supernatural powers, Imaginary objects & situations, Marked conflicts & emotional instability...fantasy, Resolve fear...react cowardly & brave

LATE SCHOOLER

Fear → bodily injury, Failures, not being liked, competition, punishment, Crowds, heights

Tolerate...unpleasant situation & obedient....emotional control

Dislikes → bullying, injustice or cajoling

ADOLESCENT

Fear → social rejection, performance, Girls....concerned about appearance, Cosmetic effects...motivation....dental attention, Ego→ willing to cooperate

AGE GROUPS (YEARS)

TYPES OF FEAR

- Fear
    - General
    - fear
        - Active/real fear
        - (objective fear)
        - Imagined fear
        - (Subjective fear)
    - Dental
    - fear
        - Fear of pain/ its anticipation
        - Fear of betrayal

- Fear of loss of control
- Fear of unknown
- Fear of intrusion

FEAR OF DENTAL SITUATION

History → traumatic dental experiences, Unfavorable family attitudes…..result in fear

Sidney Finn – objective fears, subjective fears

OBJECTIVE FEARS

Acquired objectively/direct physical stimulation, Not of parental origin, disagreeable & unpleasant, In dentistry - previous experience, Unrelated experiences, fear of uniforms, .smell of hospitals, drugs/chemicals

SUBJECTIVE FEARS

By others - without personal experiences, Family, friends, information media…

FEAR-PROMOTING WORDS

Dentist - avoid words….arouse fear, Cringe in fear…. "needle" "drill" Instead injection, needle, stick….mosquito bite, Instead drill…. brush bag bugs out

VALUE OF FEAR

Lowers the threshold of pain….during dental trt….magnified, Fear → protective mechanism…for self-preservation, Keep away from dangerous situation…..if not fear for punishment/parental disfavor…threat to society, Training the child

FACTORS CAUSING DENTAL FEAR

- Fear of pain/its anticipation
- Lack of trust/fear of betrayal
- Fear of loss of control
- Fear of unknown
- Fear of intrusion

PHYSIOLOGICAL SIGNS

Skin…pale, sweaty, Hair standing on end, Pupils…dilate, Rapid breathing, Heart rate….inc., BP raising, Inc. blood flow through muscles, Contraction….bladder & rectum

INTENSE FEAR SYMPTOMS

Unpleasant feeling, Urge…cry/hide…urinate, Pounding…heart, Muscle…tense, Dryness…throat & mouth, Nauseous & sinking, Irritability, Anger, Weakness, Sense of unreality

CHRONIC FEAR LEADS TO

Tiredness, Difficulty…..sleeping, bad dreams

Restlessness, Loss of appetite, Aggression, Avoidance of tension producing situation

RESPONSE TO FEAR – Emotional Level, Hedonic level**,** Intellectual Level

SHYNESS

Shrinking from contact…strange & unfamiliar…by **people**, Strange age/period of infantile fearfulness, Extremely intense & frequent → generalized timidity **"shy children"**…response various at different ages

EMBARASSMENT

Fear reaction to people, Differ from shyness…..about how people will judge one and one's behavior, State of self-conscious distress, Not < 5-6 yrs, memories of experiences, exaggerate their fear of how other will judge

WORRY

"imaginary fear" or "borrowing trouble" Product of child's own mind….imagining dangerous situations, Worries → center around home, family, peer, school, Inferior & inadequate → internalize, better-adjusted children → discuss, Express by facial expression

ANXIETY

Emotion…similar to fear….without any objective source of danger…..Rxn. to unknown danger, State of unpleasant feeling + impending doom/danger, Learned process….depends….ability to imagine….develops later

SUB-TYPES

ASSOCIATION - Classic conditioning….previously neutral stimuli….arousal & anxiety….pairing with pain/-ve experiences

ATTRIBUTION - Arousal….biological sphere

APPRAISAL - Cognition/the way we think….reconstruction of –ve experiences

Age of onset…childhood, **Oster et al**…20%....anxiety ...14 yrs, **Milgrom et al**…33.3% of individual...adolescence

CAUSES OF DENTAL ANXIETY

Personality characteristics, fear of pain, conditioned experiences, influence of others….vicarious learning, fear of blood-injury – site, sound, smell, stress

TYPES OF ANXIETY

- Trait anxiety
- State anxiety
- Free floating anxiety
- Situational anxiety
- General anxiety

CONSEQUENCES & COMPLICATIONS

Poor oral health, **Eitner et al…**avoidance of dental trt. ….inc. caries & DMFT scores

Inc. use of antibiotics & analgesics…exhaustion after dental appointment, Disturbance in sleep, eating patterns…self-medications

PHOBIA

Irrational fear….conscious avoidance of specific feared object/activity/situation, Persistence, excessive, unreasonable fear….specific object, Activity/situation….results in compelling desire to avoid dreaded object

TYPES

Sheldan (1982)…2 types – exogenous & endogenous, Exogenous – situation related anticipatory anxiety symptoms, eg- moist palms, hand tremors, rapid heart beat,etc.

Endogenous – cause…to be produced from within, Eg- light headedness, difficulty in breathing, paresthesia,etc.

DENTAL PHOBIA

Ivanov - simple phobia, complex phobia and phobic crisis

SIMPLE PHOBIA

- Acrophobia – height
- Agoraphobia – open space
- Arachnophobia – spider
- Anthropophobia – people
- Aquaphobia – water
- Astraphobia – lightening
- Claustrophobia – closed space
- Zoophobia – animals
- Nyclophobia – darkness

- Xenophobia – stranger
- Belenophobia- needle

SITUATIONAL PHOBIA

Fear of open space, Cluster of complaints….open/crowded places….fear public transport, bridges, tunnels, being alone at home/being away from home

CHARACTERISTICS

Dizziness, Loss of bladder/bowel control, Cardiac distress

SOCIAL PHOBIA

Fear of being looked at & appearing shameful/stupid in presence of others, Public speaking, Fear of eating, Fear of blushing

PHOBIA IN CHILDHOOD

Fear of animals in 2-10 years, **Darkness**, fear experienced b/w 4-6 yrs, School phobia, fear of attending school in 11-12 yrs, Dental phobia is previous aversive dental experiences, Adolescent → fear of blushing, fear of being looked at.

SOCIAL PHOBIA

SAD…intense fear of anxiety & social situations, Cause significant distress….have -ve effect, Mean age → **13 yrs**….marked fear/anxiety about 1 or more social situation

Behavior

Definition

Any activity that can be observed, recorded and measured. It is an observable act or any change in the functioning of an organism

-Webster's dictionary

2 types - Conscious or unconscious, Linked to…nervous, endocrine systems, hormone

Eg: change from being a child to an adult

Attitude

In psychology….psychological construct, a mental & emotional entity that inherits in or characterizes a person ….it influences behavior, Success & failure…depends on it, if attitude +ve…human relation +ve, Disposition …..approach….idea, event, person or an object

FEAR ASSESSMENTS

Children's Dental Fear Picture Test (CDFP), Dental fear survey, Children's fear survey schedule – dental subscale (CFSS-DS)

1.Children's Dental Fear Picture Test (CDFP) – Klingberg, 1994

Consists of : Dental setting pictures (CDFP- DS), Pointing pictures (CDFP– PP), Sentence completion tasks(CDFP – SC)

Dental setting pictures

Set of 10 pics (ISO A4 size papers) of animals – progressively more stress evoking dental care situation, Presented to child in numerical order

Pointing pictures

Set of five pics (ISO A4 size papers)…. human child in 5 diff. dental situation, Each card shows 2 diff reactions :

1 happy, non-fearful & 1 sad, fearful child

Child is encouraged to give an answer on how he or she would feel, being in the same situation, Each set of pics …. 2 versions …. Boys & girls

Sentence completion tasks

15 ncomplete sentences, Instructed to complete the sentence by the 1st word that comes to his/her mind

Each subtests (CFDP – DS, PP & SC) …. Assessed separately in 3 categories :

- Fearful
- Non fearful
- Uncertain

Followed by overall assessment of CDFP…valid instrument to diagnose fear….sensitivity 98.5%

2. Dental fear survey

2nd most common…..Kleinknecht et al, 1973, Originally developed as 27 item scale → **20 items**, 1984, Questions….related to physiological arousal & rxn of frnds & family, Not developed to produce single fear score…..info on variety of stimuli

20 items include :

- 2 items on avoidance of dentistry
- Single item concerning overall fear
- 5 – physiological arousal
- 12 – dental specific items

Scores – 20 to 100

3. Children's fear survey schedule – dental subscale (CFSS-DS)

Specific for children, CFSS – Scherer & Nakamura (1968), 80 items on a 5-point likert scale, High reliability & validity, Cumbersome nature of questionnaire – limited its use

CFSS – DS – Cuthbert & Melamed (J Dent Child :1982)

Temperament and child dental fear Klingberg G, Broberg AG, 1998

124 children…5-7 & 10-12 yrs

- **CDFP….** 32 - fearful, 71 – non fearful, remaining 21 - uncertain
- **CFSS – DS :**

26 children ≥ 38 indicating dental fear, while

73 18, indicating no fear at all

Temperament, shyness & comb. with –ve emotionality…dental fear

Dental anxiety scale (DAS)

Most widely used…single item question…measure "psychologic stress", Corah & Pantera, 1969, 4 item scale with 5 options in each question, Score – 4 to 20

Advantages :

Aid the dentist to be aware what to expect from pt & take necessary measures to alleviate anxiety, Self administered in waiting room in 2 mins

Disadvantages :

Range of scores too narrow to be used in clinical studies, No LA … major source of anxiety in children

Modified dental anxiety scale (MDAS)

Modified by Humphris GM, Morrisson T, Lindsay S (1995) to overcome shortcoming, 5th question was added …….**LA**, Answer options were also modified …. Same options …. 5 Q

Not, slightly, fairly, very, extremely anxious….5 – 25, ≥ 19 – highly anxious

KAREN E. HOWARD & RUTH FREEMAN, 2007

MCD AS & CFSS-DS….Reliability and validity of a faces version of the Modified Child Dental Anxiety Scale, **Concluded -** Reliable & valid measure …. 8–12 years

(Howard KE, Freeman R. Reliability and validity of a faces version of the modified child dental anxiety scale. Int J Paediatr Dent. 2007;Jul 17(4): 281-8)

Dental anxiety question (DAQ)

- Single item
- Are you afraid of going to the dentist - ?

- 1 – No
- 2 – a little
- 3 – Yes, quite
- 4 – Yes, very

Uses :

Adult & child population, Screening at large scale

Disadvantage :

Skeptical – no control for response set bias (correct/incorrect response), Don't allow for the isolation of components of multidimensional constructs, Tendency to overestimate prevalence

State-trait anxiety inventory (STAI)

Spielberger, 1983……40 Questions, Divided into 2 sections to distinguish between 2 diff types of anxiety

Venham's picture test, 1979

Series of 8 paired drawing, Each pair- non fearful & fearful pose, Indicate…which picture reflect feelings, "Anxious" figure .. score – 1, "Non-anxious" figure .. Score – 0, 0-8

Facial image scale (FIS)

Buchanan H, 2002, Row of 5 faces ranging from very happy to very unhappy, Point out which they feel the most at that situation

Evaluation of Facial Image Scale and Venham's Picture Test Used to Assess Dental Anxiety in Children

52 children…6-12 yrs…first dental visit, Anxiety measured on both scales, Week correlation b/w….FIS & VPT, Mean anxiety rating…did not differ….both scales are valid

(Srinath Krishnappa et al. JIAPHD. 2013;11 (3): 31-35)

VISUAL ANALOG SCALE

Aitken, 1969, Raters mark a point on the 10 cm line to correspond to the perceived level of anxiety (Valerie SL Williams. Psychometric evaluation of a visual analog scale for the assessment of anxiety. Health Qual Life outcomes 2010;8:57)

Newer scales

Smiley faces program

Buchanan, 2010…..Computerized version of FIS, Range of 7 facial expressions indicating how they feel, 5 questions – dental experience, Questions appear on the screen for a matter of secs & then child is asked to replace neutral face with one of the 7 faces

Advantages

Psychometric prop, Engages anxious children in a novel & innovative way

Anxiety thermometer

Image of a thermometer…select a appoint…to rate anxiety, "no anxiety" & 10 = extreme anxiety

RMS Pictorial Scale (RMS-PS)

Raghavendra, Madhuri, Sujata…pictorial scale…2015, Innovative scale …. anxiety

Original photographs …. separate for boy and girl child, Row of five faces ranging from very happy to very unhappy, asked to choose the face they feel like about themselves at that moment

(RM Shetty, M Khandelwal, S Rath. RMS-PS : an innovative scale for the assessment of child's dental anxiety. J Indian Soc Pedod Prev Dent 2015;33:48-52)

Shetty RM, Khandelwal M, Rath S; 2015

To validate RMS-PS and to compare it with VPT & FIS in measuring dental anxiety for young children during their first dental visit, 102 children, 4-14 yrs, anxiety measured

Strong correlation (0.76), between VPT & RMS-PS

Moderate correlation (0.5), RMS-PS & FIS, indicating good validity for RMS-PS

Conclusions: RMS-PS is newer and easiest means

Advantages

Attractive…colorful…easily understood, Less time…to complete, Gives immediate feedback, Child identify themselves better, Separate for boys & girls…acceptability

Chotta Bheem–Chutki scale

Sri Guru Ram Das Institute of Dental Sciences and Research, Amritsar , 2 separate cards…boys & girls, Boys → chotta bheem, girls → chutki cartoon character, Series of 6 figutes….happy, unhappy, running

(Sadana G et al. A novel chotta Bheem-chutki scale for dental anxiety determination in children. 2016;6(3):200-205)

Sadana G, Grover R, Mehra M, Gupta S

Validate chotta bheem-chutki scale & compare with VPS & FIS, 100 children…4-12 yrs

Anxiety level measured….3 diff. scales, Strong correlation (0.778)….b/w FIS & CBC, Strong correlation (0.811)….VPS & CBC…good validity of CBC….newer tool

(A novel Chotta Bheem–Chutki scale for dentalanxiety determination in children.JISPCD 2016;6(3))

Pain cry – begins suddenly….non-stop & uncontrollable….high pitched & shrill

Manipulative cry – for sympathy…..characteristic feature….get away

Boredom cry – whiny & whimpering….sounds like moan…stops abruptly

(Correlation of crying pattern to clinical diagnosis of children undergoing treatment. IJCD Sep 2010;1(1)

STRATEGIES TO MANAGE CHILD EMOTIONS

PREAPPOINTMENT MODIFICATION

Audiovisual Modeling

Goal → reproduce behavior, Child sees video cassette….child relate himself with model

Advantages – Extinction of fear, new behavior, appropriate manner

Preappointment Mailing

Send preappointment email, preappointment call

Parent's instruction:

- ✔ Inform child about dental visit casually
- ✔ Dentist count your teeth & look after them
- ✔ Child's first name, nick name, name of child's pets, toys, friends & his interest

THE CLINIC ENVIRONMENT

Receptionist, dental nurses, hygienists → crucial personnel…+ve & caring, Office atmosphere → calm, unthreatening …Operating room → cartoons, pictures on wall, Bare & Dundes…slightly cooler…preferred

Wall → posters & pictures, **Waiting areas** → books & magazines

Sound…muted….anxious pts. Not to be made wait long, Aromatherapy….essential oil of aromatic plants…anxiolytic effect

(Kritsidima M et al. The effects of lavender scent on dental patient anxiety levels: a cluster randomized-controlled trial. Community Dent Oral Epidemiol.2010;38(1)83-87.)

Toda M, Morimoto K, Lavender aroma

(Toda M, Morimoto K. Effect of lavender aroma on salivary endocrinological stress markers. Arch Oral Biol. 2010;53(10):964-968.)

MANAGEMENT OF EMOTIONS

RAPPORT & COMMUNICATION

1st objective → establish communication, Involve child in conversation, Hamasaki & colleagues…pt's +vely about communication…better outcomes → satisfaction & lower fear

Communication with children…2-7 yrs…**Piagetian** concept…Animism, Honesty of approach….Getting the child to respond….use +ve languages

ESSENTIAL ELEMENTS

- Establishing 2 way interaction

Genuinely acknowledging…pt. concerns, Effective listening, Accurate reflection, Demonstrating empathy, Voice & tone.... "iatrosedative techniques"

TELL-SHOW-DO - Addleston…1959

Venezuela …children assigned to this….no evidence of inc. BP vs no psychological trt. Group, Reducing anticipatory anxiety in new child pt., Beretz et al. (2003)…70% pediatric dentist…use, Sharma A & Tyagi R (2011)…this modifies behavior & achieving trt. goal effectively

EXPLAIN-ASK-SHOW-DO

- **Explain** → next step….answering questions
- **Ask** → permission to proceed
- **Show phase**…familiar with armamentarium
- **Do phase**…begin trt without any change
- Respecting the pt….physically & emotionally

(Hendrie F. Tell-show-do- its not just for children! May 2013)

REST BREAKS

Initiated by…dental practitioner/patient, "cant bear it any longer"….rest break, Pause the procedure…inc. sense of control ….dentist start communicate at start of appointment, Inc. anxious & restless → break. Closing mouth & resting

(Armfield JM et al. Management of fear and anxiety in the dental clinic : a review. Australian Dental journal 2013; 58: 390-407)

SIGNALLING

Building communication & trust…sense of control ↑, Specific signals….

A → feeling pain

B → feeling giddy/light headed

C → needed additional suction

D → feeling tired

E → wanted to know…how much longer

(Singh et al. Effect of perceived control in mangemtn of anxious patients undergoing endodontic therapy by use of an electronic communication system. J Conserv Dent 2012;15:51-55.)

POSITIVE REINFORCEMENT

Presentation….inc. frequency of desired behavior – Material, social and activity. Done to appreciate the child….good behavior, Levy & Domoto…+ve reinforcement…highly preferred tech….pedodontics dental practices, Physical manifestation….smile. For anxious pt. a moment of escape from fear-inducing situation (Kuhn 1994)

DIAPHRAGMATIC/RELAXATION BREATHING

To combat anxiety…effective in reducing perceived pain, Several variation…Milgrom et al. slow, deep breaths, holding each breath for approx. 5 secs before slowly exhaling, 2-4 mins.. More O2 to brain…↓ HR, Ackley…breathe so slowly …if a feather under nose…not move

MUSCLE RELAXATION

Standardized for use…by therapist & researchers, Muscle is tense → releasing tension → relaxation in muscle, Focus on voluntary muscle, Breathing → slower & deeper, HR, BP dec.

Vasodilatation in capillaries, Sense of calmness & ease

GUIDED IMAGERY

Patient mentally taking themselves…pleasant / relaxing place, Eg- beach, mountain scenery, etc., Removes focus on dental procedure, Dentist → guides the pt. through the scene…rich in details & engage pt. senses (Armfield 2013)

Gonzales EA et al.

Evaluate the effect of guided imagery….postoperative outcomes, 44 pts…head & neck procedures…2 groups, Guided imagery compact disk, Red. Postoperative anxiety, less postop. Pain, earlier PACU discharge time

(Gonzales EA et al. Effects of guided imagery on postoperative outcomes in patients undergoing same-day surgical procedures: a randomized, single-blind study. AANA J. 2010;78(3):181-188.)

COGNITIVE RESTRUCTURING

Aim → alter & restructure….contents of –ve cognitions & enhance control over –ve thoughts (Kendall 2006) – encouragement, altering expectations, thought stopping, focusing attention

SYSTEMATIC DESENSITIZATION

Demo…James & popularized…..Wolpe, Gradually exposing fearful individual…to the aspect of dentistry, Eg- for patient who is fearful to injection, Hakeberg & collegues…greater fear reduction …improvement in mood after dental trt., Computer based…CARL….↓ Fear & anxiety

1st phase → pt. indicate most fearful condition

2nd phase → teaching relaxation tech.

3rd phase → exposure to trt. (Fargat-McHayleh 2009)

PROGRESSIVE MUSCLE RELAXATION

Jacobson's tech….ind. Muscle tested for 5-7 sec.,Relaxed for 20 secs

HYPNOSIS

Suggested by….Franz A Mesmer…1773, "State of mental relaxation & restricted awareness, subjects are usually engrossed in their inner experiences such as imagery, are less analytical & logical in their thinking, enhanced capacity to respond to suggestion in an automatic & dissociated manner"

TECHNIQUE

Informed consent from parent…Children Act of 1989, Hypnotic induction: Aim → relax & encourage to focus

1) Focus on stimuli of particular modality
2) Giving repeated instructions
3) Focussing + suggestion = more powerful effect

MODELLING

Bandura's social learning theory….one's learning/behavior acquisition occurs through observation of suitable model performing a specific behavior, Particularly efficacious…no previous exposure, Johnson & Machen…children viewed 12-mins videotape…exhibit more +ve behavior

TYPES OF MODELING

Chambers DW (1970)

- Live- Sibling/parent
- Filmed – Audio-visual

ADVANTAGES OF MODELING

Rim & Masters, 1974

Pt's attention obtained, Designed behavior is modeled, Physical guidance of desired behavior, Reinforcement - guided behavior

DISTRACTION

Distracted…from sound/sight of dental trt…reducing anxiety, Stories, fairy tales, slow instrumental music, etc., Choice → chosen by patient….gain control & familiar env. Feeling, Audiovisual presentation → multisensory distraction, Placebo effect

Efron LA et al….engaging in a discussion…pleasant topic, Giving counting task, holding toy, mirror, Computer games, 3D video glasses, Hoffman HG et al…virtual reality glasses…red. BP, pulse rate & pain rating in pt's undergoing dental trt.

TYPES OF DISTRACTION

- Audio Distraction –through headphones
- Audiovisual Distraction –Through TV

VOICE CONTROL

Pinkham….1985, Controlled alteration of voice…volume, tone, pace….specifically …equates in loud voice…red. Child's disruptive behavior

(Newton T et al. The management of dental anxiety: time for a sense of proportion? Br dent 2012;213:271-274.)

Soft, monotonous soothing conversation, Tone of voice….facial expression….imp., Objectives – gain attention, avoid –ve behavior, establish authority, Indications – uncooperative & inattentive pts, Contraindications – due to age, disability, mental/emotional immaturity….unable to understand

RESTRAINT

Partial or complete immobilization of the patient euphemistically called "protective stablilization", Mechanical – papoose board method, Physical – hand-over-mouth exercise, holding child, AAPD, no other alternatives are available

INDICATIONS

Pt - diagnosis/treatment cannot cooperate because of lack of maturity, Mental/physical disabilities When other behavior management technique failed, Safety…pt/practitioner….at risk

CONTRAINDICATIONS

Cooperative pt., Cannot be safely immobilized…underlying medical/systemic conditions

As punishment, Not used solely…for convenience of staff

AID

- Mouth - Tongue blades, mouth prop, Rubber bite blocks, finger guards
- Body - Papoose board, triangular sheet, pedi-Wrap, Beanbag, safety belt
- Extremities - Posey straps, Velcro straps, Towels & tape, extra assistant
- Head - Head positioner, extra assistant

SEDATION

INHALATION SEDATION

Commonly used technique is N2O+ O2 - anxiolytic & sedative effect, muscular relaxation & analgesia, Non irritant, 70% pt. need 30-40% N2O → sedation, N2O – sweet smelling, colorless, non-inflammable, inert gas, 750 psi as a liquid with rapid onset & recovery

INDICATIONS

- Fearful & anxious
- Lack of psychological/Emotional maturity
- Cannot cooperate definite trt.

TRTEATMENT APPROACHES FOR MANAGING DENTAL ANXIETY

SCHEDULING APPOINTMENTS

Schedule appointment when they are not rushed or stressed, Early in the morning….circumvents stressing about visit all day, Avoid delay in being seen, Bring close friend/relative….advocate & social support

TREATMENT PLANNING

Flexible & introduced in phases, Commencing…least : fear-evoking, painful & traumatic

Initial phase → inc. pt's ability to tolerate trt., desensities, built trust, proceeding slowly, rest breaks, muscle relaxation, distraction

ALTERNATIVE METHODS

Drill → most anxiety provoking items in dental office, ART, air abrasion, lasers, etc. Carvalho TS et al found ART is suitable approach used in children, special needs pts., pts. Who demonstrate fear & anxiety towards dental trt.

COMPUTER CONTROLLED LA DELIVERY SYSTEM

Wand system – 1997, Significant change in the manner….injection..… alleviating anxiety, Plastic handpiece…less threatening, **Advantages** – control….flow rate & pressure, inc. tactile sensation, automatic aspiration

ELECTRONIC DENTAL ANESTHESIA

Principle → transcutaneous electric nerve stimulation, Electrodes…electric flow → ionic current flow…anesthesia produced, **Advantages** – no needle usage, no injection of drug, no residual anesthetic effect

CONCLUSION

- ✔ Not to voice ur personal fear infront of child, Primary Cause is hearing.
- ✔ Never use dentistry as threat/punishment
- ✔ Familiarize child with dentistry
- ✔ Display courage
- ✔ Counsel home environment & attitudes
- ✔ Stress the value of regular dental care
- ✔ Discourage bribing to go to the dentist
- ✔ Never shame, scold or ridicule to overcome fear
- ✔ Not promise what is or is not going to do which gives them disappointment & mistrust

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