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A Study of Correlation between Parents Satisfaction, Concerns of Occupational Therapy Interventions for Peadiatrics

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Abstract: Aim: The aim of this study was to assess the correlation ship between the parent's satisfaction concerns of occupational therapy interventions for paediatrics. Subjective: The study was done to evaluate the correlation ship between the parent's satisfaction concerns of occupational therapy interventions for paediatrics. Objectives: 1) To evaluate the parents concerns of occupational therapy implementations among paediatric using functional assessment of academic behaviour parent checklist (FAAB). 2) To evaluate the client satisfaction of occupational therapy implementations among paediatric using client satisfaction questionnaire (CSQ). 3) To evaluate the client satisfaction goal of occupational therapy implementations among paediatric using goal attainment scale (GAS). 4) To evaluate the occupational performance problems, concerns and issues, interview the client, asking about daily activities in self-care amongst paediatrics using Canadian occupational performance model (COPM). Methodology: Review studies met the inclusion criteria. In total, there were 50 participants within the review studies that were examined. Review studies explored parent satisfaction as an outcome measure of occupational therapy interventions for paediatric populations. Assessment methods and findings were extracted from the selected studies. Information regarding the assessment tools used to determine parent satisfaction was extracted. Also extracted were the results of the satisfaction assessments used by the studies. Results: The study designs included review qualitative studies and review of randomized control trial. Tools used to measure parent satisfaction, included the MPOC-20, FAAB, COPM, GAS and the CSQ. Best practice for occupational therapy include, facilitating goal setting with clients and communicating efficiently with parents, allowing them to ask questions for comprehension of the clinical aspects, explaining the child's procedures and providing follow up time to discuss improvements or setbacks. Conclusion: The conclusion of this study indicates that there is correlation ship between the parent concerns and parent satisfaction in the studies reviewed suggest there may be value in understanding parent consideration and Working as a cohesive, occupational therapy for the overall benefit of a child. Thus, proving the alternate hypothesis and rejecting the null hypothesis.

Keywords: Occupational Therapy, parent satisfaction, paediatrics outcome measures, therapist parent relationships, parent preferences.

1. Introduction

Parent satisfaction has considered as vital component in the evaluation of occupational therapy interventions in the paediatric population .Paediatric occupational therapists promote independence, personal growth and development to improve quality of life for children who have disabilities, diseases or face daily life limitations.

It is important that parents recognize and understand the improvements their children make during occupational therapy. McCall and Scheck report that parents' perceptions of occupational therapy interventions may be affected by poor therapist communication and this could limit the beneficial effect of service provision for children if the parent's needs and expectations are not met Anne Rannard et al Health professionals failed to use systematic, evidencebased approaches in responding to early parental concerns. For this group of parents, such an approach resulted in long delays in referral for specialist intervention. Carrigan et al. states that determinants of parent satisfaction with OT interventions have been identified as seeing an overall improvement, enjoyment of therapy sessions, opportunities for group as well as individual sessions, provisions of home programs and school visits by the therapist.

Parent satisfaction in therapy clinics has generated little attention in the scientific literature. Green indicates there is a lack of high quality research that evaluates parent's perception of the quality of paediatric care their child receives. Green indicated that in recent years, the interest in parental satisfaction with healthcare providers who treat

children with different disabilities has increased. Carrigan et al. suggests that parent satisfaction positively correlates with increased partnership and participation between OT and SLP health care providers and parents. Lee and Korczak suggests that parent satisfaction positively correlated with the amount of time between referral and consultation, the degree of attention from therapist and the volume of information.

Obtained in concluding consultations. Improvement in parent's Satisfaction with health care is associated with reduction of symptoms and improved adherence to the therapeutic regimen and understanding medical .He value of addressing parental satisfaction has become a growing necessity due to hospital requirements by the state and private sector to document quality improvement measures. Carrigan, Rodger and Copley identified the scarcity of OT research that has focused on evaluating parent satisfaction with paediatric services, indicating further research is needed when addressing parent satisfaction and views about the family-cantered nature of therapy.

His scoping review is intended to discover if the importance of determining parental satisfaction is present in literature. He primary purpose of this scoping review is to explore whether the research on the effectiveness of OT for children has addressed the important concept of parent satisfaction. He secondary purpose is to explore the outcome methods that were used to assess parent satisfaction. Our tertiary purpose is to understand how the results of these assessments can influence the relationship between therapist and parents. Occupational Therapy is Used to Complement health care professions are quite familiar with the field of occupational therapy before they even enter their own

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profession. Often, health care Professions have seriously considered going into occupational therapy before finally settling on, and vice versa. The common thread between the two professions is clear: A desire to help patients improve their lives. Occupational therapists achieve this through the concept of providing job training for the "job of living." An outgrowth of moral improvement movements stretching as far back as the Enlightenment, the idea that even the most limited or disabled individuals could be taught to perform productive and beneficial tasks in society was revolutionary at the time.

It has since evolved to take on a more therapeutic function, helping in facilitation and rehabilitation designed to train patients how to engage in self-care and in basic life skills that might otherwise be difficult or overwhelming due to disease, injury or disability. OTs may work with patients who have problems with Feeding, Swallowing, Cognition, Posture, Language learning and developmental difficulties in paediatric implementation

Even many of their treatment modalities are similar. The approaches that any OT might use in treating an eating problem rooted in myo-functional disorder, for example, will likely revolve around teaching the patient improved resting postures of the labial and lingual musculature, strengthening and retraining exercises for the affected muscles, and modification of eating habits and techniques to accommodate remaining disability. The tools and techniques might be utterly indistinguishable to most observers. Where they differ is largely a matter of their therapeutic focus. An SLP will concentrate on issues of communication and problems arising from disabilities in the upper gastrointestinal tract. OTs are more interested in a bigpicture perspective, analyzing the patient's problems as a larger set of interrelated issues and developing treatments to account for each of them. For example,

An OT presented with the same patient might incorporate larger considerations of autistic disability into their treatment: they might recognize that the major obstacle to learning sounds is not necessarily a mechanical deficiency in the auditory or speech function, but rather a dramatically shortened attention span and social dysfunction. Their treatment options could extend well beyond teaching sound creation skills, instead verging into socialization exercises and sensory integration therapy.

It is in this big-picture perspective that occupational therapy has the most to offer to speech-language pathologists. No amount of sound drill repetition will correct a short attention span. These are called executive function skills—the ability to comply with training directed by specialists such as health care professions. OTs also can help improve postural stability, which is critical for some swallowing and speech patients.

2. Aim and Objectives

2.1 Aim

The aim of this study was to assess the correlation ship between the parent's satisfaction concerns of occupational therapy interventions for paediatrics.

2.2 Objectives

- To evaluate the parents concerns of OTs implementations among paediatric using functional assessment of academic behaviour parent checklist (FAAB).
- To evaluate the client satisfaction of OTs implementations among paediatric using client satisfaction questionnaire (CSQ).
- To evaluate the client satisfaction goal of OTs implementations among paediatric using goal attainment scale (GAS).
- To evaluate the occupational performance problems, concerns and issues, interview the client, asking about daily activities in self-care amongst paediatrics using Canadian occupational performance model (COPM).

2.3 Hypothesis

Null Hypothesis

There is no significant correlation ship between the parent's satisfaction concerns of occupational therapy interventions for paediatrics.

Alternative Hypothesis

There is significant correlation ship between the parent's satisfaction concerns of occupational therapy interventions for paediatrics.

3. Review of Literature

Anne Rannard, Christina Lyons, Sheila Glenn et.al (2005)

The aim of this study was examine parental accounts of health visitor and GP involvement in the assessment and diagnosis of their children's speech and language impairment. Methods In-depth interviews were conducted with 40 parents. Interviews were transcribed and thematically analysed. Twenty per cent of interviews were analysed by an independent researcher and consensus reached on thematic content. Results

In many cases, parents were the first to realise that there was something wrong with the speech and language development of their child. Parents reported that health professionals tended to underestimate speech and language problems, and failed to take parental views into account. In some cases, parents found that attending a specialist unit or hospital resulted in the children reaching school age before referral to speech and language therapy was made. In other cases, health professionals appeared to rely on the possibility of spontaneous recovery, and gave inappropriate advice to parents, which resulted in delayed referral to speech and language therapists.

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Anne Cusick, Sarah Mcintyreet.al (2006)

The aim of this study was to review the measurement tools used, to investigate the relative utility of Canadian Occupational Performance Measure (COPM) (adapted for children) and Goal Attainment Scaling (GAS) as outcome measures for paediatric rehabilitation. A two-group pre-post design investigated the impact of a 3-month programme. Forty-one children with spastic hemiplegic cerebral palsy (mean 3.9 years; GMPM level 1; 21 boys, 10 girls) were randomized to occupational therapy only and occupational therapy plus one Botulinum Toxin an injection. The latter was considered a 'proven' intervention for the purpose of this instrumentation study. Intervention impact was investigated using GAS and COPM. Instrument sensitivity, convergent validity, goal/problem profiles and administration were evaluated. Both instruments were sensitive to within group change and detected significant between group changes. Likert scale coding for GAS scores was more sensitive than the traditional weighted GAS or COPM. Different constructs were measured by each instrument. COPM was more time efficient in training, development and administration. Study aim, logistic and resource factors should guide the choice of COPM and/or GAS instruments as both are sensitive to change with a proven intervention and both evaluate different constructs

Merhar Anita, Jesenko Ana et. al (2016)

The aim of the study was to finding the best available evidence on GAS. Occupational therapists have a range of evaluation instruments at their disposal, which they use to evaluate the recovery progress of a patient and thus the effectiveness of the occupational therapy intervention. In this study we wanted to check the complementarily and coherence of two evaluation instruments aimed at evaluating the progress of children with special needs, the Goal Attainment Scaling (GAS) and the Paediatric Evaluation of Disability Inventory (PEDI), both aimed at evaluating the pro- gress of children with special needs. Results: The study included 23 children with an average age of 4.3 years. Of these, 13 children had cerebral paralysis of a different stage according to the Gross Motor Function Classification System (GMFCS). Ten children had other developmental disorders.

Joseph Schreiber, Jennifer Benger et. al (2011)

The aim of the study was to investigate whether Measure of Processes of Care (MPOC-20) The Measure of Processes of Care (MPOC)-20, a quantitative measure of parent perceptions related to FCC, was completed by 246 families with children receiving outpatient rehabilitation services. Eleven parents were randomly selected to participate in individual interviews. Four themes emerged, which are as follows: (a) parents were satisfied; (b) parents valued personal and sustained connections with professionals; (c) parents expressed a desire to interact with other parents; and (d) some parents may benefit from additional written information. Sustained connections with professionals and opportunities to interact with other parents were important aspects of care provision. Provision of written information was ranked lower than other domains on the MPOC-20.

Jim Hinojosa, Christine T. Sproat, Supawadee Mankhetwit et al(2002)

The aim of the study was to describe the Shifts in Parent-Therapist Partnerships. Method Surveys were sent to a random sample of 400 therapists, with 199 returned from respondents who identified themselves as working with preschool children with developmental disabilities. After calculating descriptive statistics for each item in the survey, a one-way analysis of variance was performed to test for differences based on four demographic variables. Results: Respondents reported that working with parents, more than any other aspect of intervention, had the greatest impact on the progress of a child with disabilities. Consistent with the 1987 survey, respondents believed that parents focus on their own adjustment to their child's disability as well as on their child's progress more than any other issues. Therapists continue to report satisfaction when generating positive change forchild and parent through education and use of clinical knowledge and skill.

Sara E. Green et al (2002)

The aim of the study was to describe the maternal satisfaction with clinics providing physical, occupational and speech therapy services to children with disabilities. Little is known about maternal satisfaction with clinics that provide physical, occupational and speech therapy services to chronically impaired children. Because of the frequency and duration of contact between mothers and therapy clinics, this represents a significant gap in the literature on satisfaction with health care providers. This study uses a modified labelling approach to the issue of interactions between the own, the wise and the others as a framework for understanding such satisfaction. Data are drawn from a survey of 81 mothers of children regularly treated at one of three paediatric therapy clinics, and from extensive interactive interviews with seven of these mothers. Among mothers who do not prefer interactions with wise individuals, perceived stigma is inversely related to overall satisfaction and moderates the relationship between the social environment and satisfaction. The greater the degree of perceived stigma, the more important the social environment of the clinic is to overall satisfaction among mothers who do not prefer interactions with the wise.

Caitlin M Moll, Meghan N Billick, Kristin et al (2018)

The aim of the study is to analyse to determine parent satisfaction with OT interventions for variety of paediatric conditions. The purpose of this review was to explore whether the research on the effectiveness of OT interventions for children has addressed the important concept of parent satisfaction. There is limited OT research that evaluates parent satisfaction in paediatrics. Greater parent satisfaction with OT services results in better treatment adherence for paediatric care. Methods: Five studies met the inclusion criteria. In total, there were 139 participants within the five studies that were examined. Five studies explored parent satisfaction as an outcome measure of OT interventions for paediatric populations. Assessment methods and findings were extracted from the selected studies. Information regarding the assessment tools used to determine parent satisfaction was extracted. Also extracted were the results of the satisfaction assessments used by the studies. Results: The study designs included four qualitative

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studies and one randomized control trial. Tools used to measure parent satisfaction, included the MPOC-20, MPOC-56, COPM, GAS and the CSQ. Best practice for OT's include, facilitating goal setting with clients and communicating efficiently with parents, allowing them to ask questions for comprehension of the clinical aspects, explaining the child's procedures and providing follow up time to discuss improvements or setbacks. Conclusion: The studies reviewed suggest there may be value in understanding parent consideration and working as a cohesive, interdisciplinary team for the overall benefit of a child

Jim Ysseldyke , Adam J. Lekwa , David A. Klingbeil et.al (2012)

The aim of this study was to examine assessment of ecological factors that affect individual mental health or academic functioning is an important component of educational and psychological consultation. Researchers and practitioners have conceptualized such ecological or environmental factors in a variety of ways and from a broad range of perspectives. In this article we identify and describe important components of a student's environment that affect both instruction and mental health. The integration of these components into present educational and psychological assessments is discussed in light of available research. We conclude by highlighting specific needs for further research and development in ecological assessment, including expansion and improvement of assessment methods, improvement of available instrumentation, and increased attention toward effective implementation.

4. Methodology

The aim of this study was to assess the correlation ship between the parent's satisfaction concerns of occupational therapy interventions for paediatrics.

Research Design

The research design is a non-experimental and was a survey based study.

Population

Accessible population was adapted in this study.

Sampling Size

50 subjects are included in this study.

Sample Techniques

Convenient sampling technique was adapted.

Study Place

The subjects were selected from MRM clinic, Department of occupational therapy, Trichy.

Inclusion Criteria

- Both genders were included.
- Subject's criteria consisted of full text studies that assessed parent satisfaction, concerns OTspaediatrics.
- Paediatric subjects were only included.

Exclusion Criteria

• Exclusion criteria consisted of studies with children older than 18 years of age.

Duration of the Period

Total duration of the study was 3 months.

Tool Discrimination

Reliability/Validity

The reliability of a therapist's judgement of the impact of intervention. Validity Whether the GAS procedure is measuring what purports to measure (GAS has been criticized as being a way for therapists to set easy goals that are not clinically relevant)

Procedure of Study

A sample size of 50 subjects was included in this study. Initially, permission for doing research was received from the subjects by getting consent form. Then details such as name, age, sex, history of parent concerns and satisfaction was taken by using assessment form and the procedure was explained to the subjects. To evaluate the client satisfaction goal of occupational therapy implementations among paediatric using goal attainment scale (GAS).

Using GAS for Program Evaluation

For program evaluation purposes, users of GAS need to calculate a summary score to reflect the overall goal attainment of clients. The recommended procedure is to convert clients' outcome scores on all their goals into aggregate T- scores that can be summarized, using a statistical software package like Statistical Package for the Social Sciences (SPSS) [see Cardillo & Smith (1994) for a discussion of T-scores and other summary scores] Aggregate T-scores facilitate reliability analyses, comparisons across clients and comparisons with standardized measures.

Aggregate T-scores for each client can be computed using the formula developed by Kiresuk and Sherman (1968):

$$T = 50 + (10 \Sigma \text{WiXi})$$

$$\sqrt{(1 - r) \Sigma \text{Wi2} + r (\Sigma \text{Wi2})}$$

In this formula, 50 represents the mean, 10 the standard deviation, Wi the weighting for a particular goal [Cardillo &Smith (1994) strongly recommend against weighting goals],Xi the score for each goal, and r the expected overall inter correlation among outcome scores (the formula assumes a correlation among goals of .30)This formula may appear time-consuming and difficult to use, but the need for manual computation is rare (if goals are not weighted and the suggested intercorrelation of .30 is used, tables are available that allow the quick and easy conversion of outcome scores into T-scores (see Kiresuk et al., 1994)

5. Data Analysis and Results

Table 1: The correlation ship between the parent's satisfaction concerns of occupational therapy csq-c1 and occupational therapy csq-s2 interventions for paediatrics.

Category	Mean value	SD	P value	r value
Occupational therapy-CSQ-c1	2.72	1.14	1.5737	0.232
Occupational therapy-CSQ-s2	2.35	1.16		

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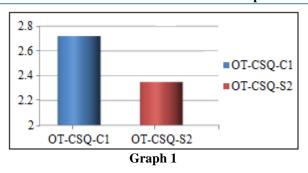


Table: 1 and Graph: 1 The correlation ship between the parent's satisfaction concerns of occupational therapy CSQ-C1 and occupational therapy CSQ-S2 interventions for paediatrics mean values are 2.72 and 2.35 respectively, where the r value is 0.232 and p value is 1.5737 which shows it is statistically significant.

Table 2: Correlation ship between the parent's satisfaction concerns of occupational therapy-c1 and occupational

therapy-s2							
Category	Mean value	SD	P value	r value			
Occupational therapy-GAS-c1	1.58	0.57	2.9898	0.120			
Occupational therapy-GAS-s2	1.22	0.65					

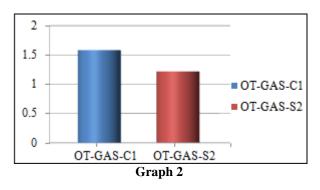
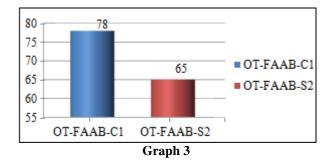


Table 2 and Graph 2 is showing the correlation ship between the parent's satisfaction concerns of occupational therapy and speech language pathologist interventions for, where mean values are 1.58and 1.22 respectively, where the r value is 0.120 and p value is 2.9898 which shows it is statistically significant



Graph 3 is showing the correlation ship between the parent's satisfaction concerns of occupational therapy Groups where percentage FAAB steps statics.

6. Discussion

The purpose of this study was to assess the correlation ship between the parent's satisfaction concerns of occupational therapy interventions for paediatrics.

The aim of the study was to identify the impact of parent's satisfaction concerns of occupational therapy interventions for paediatrics.

In this study, the subjects were chosen from Annai therapy clinic, Trichy and SN Medical College and hospital Bangalore based on the inclusion criteria. The data collection was done by using functional assessment of academic behaviour parent checklist (FAAB) and client satisfaction questionnaire (CSQ). The collected data were calculated by using statistical principles. Finally, the correlation was done by using Karl Pearson's correlation coefficient.

Table: 1 and Graph: 1 is showing the correlation ship between the parent's satisfaction concerns of occupational therapy-csq-c1 and occupational therapy csq-s2 interventions for paediatrics mean values are 2.72 and 2.35 respectively, where the r value is 0.232 and p value is 1.5737 which shows it is statistically significant.

That result was supported by Jim Hinojosa, ChristineT. Sproat, Supawadee Mankhetwit et al (2002) the aim of the study was to describe the Shifts in Parent-Therapist Partnerships. Method Surveys were sent to a random sample of 400 therapists, with 199 returned from respondents who identified themselves as working with preschool children with developmental disabilities. After calculating descriptive statistics for each item in the survey, a one-way analysis of variance was performed to test for differences based on four demographic variables. Results Respondents reported that working with parents, more than any other aspect of intervention, had the greatest impact on the progress of a child with disabilities. Consistent with the 1987 survey, respondents believed that parents focus on their own adjustment to their child's disability as well as on their child's progress more than any other issues. Therapists continue to report satisfaction when generating positive change for child and parent through education and use of clinical knowledge and skill.

Table: 2 and Graph: 2is showing The correlation ship between the parent's satisfaction concerns of occupational therapy and speech language pathologist interventions for, where mean values are 1.58 and 1.22 respectively, where the r value is 0.120 and p value is 2.9898 which shows it is statistically significant.

That result was supported by Merhar Anita, Jesenko Ana et. al (2016)The aim of the study was to finding the best available evidence on GAS. Occupational therapists have a range of evaluation instruments at their disposal, which they use to evaluate the recovery progress of a patient and thus the effectiveness of the occupational therapy intervention. In this study we wanted to check the complementarily and coherence of two evaluation instruments aimed at evaluating the progress of children with special needs, the Goal

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Attainment Scaling (GAS) and the Paediatric Evaluation of Disability Inventory (PEDI), both aimed at evaluating the progress of children with special needs. Results: The study included 23 children with an average age of 4.3 years. Of these, 13 children had cerebral paralysis of a different stage according to the Gross Motor Function Classification System (GMFCS). Ten children had other developmental disorders.

Graph: 3 are showing the correlation ship between the parent's satisfaction concerns of occupational therapy where mean FAAB steps statics.

These results are supported by that data was supported by Caitlin M Moll, Meghan N Billick, Kristin et al (2018) the aim of the study is to analyse to determine parent satisfaction with OT interventions for variety of paediatric conditions. The purpose of this review was to explore whether the research on the effectiveness of OT interventions for children has addressed the important concept of parent satisfaction. There is limited OT research that evaluates parent satisfaction in paediatrics. Greater parent satisfaction with OT services results in better treatment adherence for paediatric care. Methods: Five studies met the inclusion criteria. In total, there were 139 participants within the five studies that were examined. Five studies explored parent satisfaction as an outcome measure of OT interventions for paediatric populations. Assessment methods and findings were extracted from the selected studies. Information regarding the assessment tools used to determine parent satisfaction was extracted. Also extracted were the results of the satisfaction assessments used by the studies. Results: The study designs included four qualitative studies and one randomized control trial. Tools used to measure parent satisfaction, included the MPOC-20, MPOC-56, COPM, GAS and the CSQ. Best practice for OT's include, facilitating goal setting with clients and communicating efficiently with parents, allowing them to ask questions for comprehension of the clinical aspects, explaining the child's procedures and providing follow up time to discuss improvements or setbacks. Conclusion: The studies reviewed suggest there may be value in understanding parent consideration and working as a cohesive, interdisciplinary team for the overall benefit of a child.

The present study showed significantly that there is an impact of the correlation ship between the parent's satisfaction concerns of occupational therapy and speech language pathologist interventions for paediatrics. Based on the results and interpretation, the study accepts the alternative hypothesis and rejecting the null hypothesis.

7. Conclusion

From the result of this study it was concluded that there is significant the correlation ship between the parent concerns and parent satisfaction in the studies reviewed suggest there may be value in understanding parent consideration and Working as a cohesive, occupational therapy for the overall benefit of a child. Thus, proving the alternate hypothesis and rejecting the null hypothesis.

8. Limitations and Recommendations

Limitations

- a) The study was conducted on paediatrics.
- b) The study was done on a small sample size.
- c) The study was conducted for shorter duration.
- d) The study was conducted from only hospital and clinic.

Recommendations

- a) The study can be conducted on different aged professionals.
- b) The study can be conducted on other professionals.
- c) The study can be done on mass sample size.
- d) The study can be conducted on multiple hospital and clinics.

References

Text Books

- [1] Annie Turner, Marg Fosteret al., Occupational Therapy and Physical Dysfunction, 5th Edition, Page No. 521-541
- [2] O. Hokwerda et al., (2006), Ergonomic Requirement for Dental Students, Guidelines and Recommendation for Designing, Constructing and Selecting Dental Equipment.
- [3] P. R. Kothari And Gauraggarg et al., Research Methodology, Methods and Techniques, 3rdEdition, Page No 312-327.
- [4] Dr. S.P. Gupta "Statistical Methods", 5thEdison.

Journals

- [5] Abdul Rahim Shak et al., Work Related Musculoskeletal Disorders among Dental Surgeons, (July-2013), www.comtemplindent.org, IP: 164.100.31.82.
- [6] Bethani Valachi, Mechanism Leading To Musculoskeletal Disorders in Dentistry, Journal Of American Dental Association, vol. 134, 2003.
- [7] Carolina H.Y. Lington, Hand Grip Strength at Midlife and Familiar Longevity – The Leiden Longevity Study, Official Journal of The American Aging Association, vol. 34, issue – 3, 2012, pp 1261- 1268.
- [8] Catherine Cook et al., (2000), The Prevalence of Neck and Upper Extremity Musculoskeletal Symptoms in Computer Mouse Users, International Journal Of Industrial Ergonomics, 347 336.
- [9] Chistos Savva et al., Test -Retest Reliability Of Handgrip Strength Measurement Using A Hydraulic Dynamometer In Patients With Cervical Radiculopathy, Journal Of Manipulative And Physiological Therapeutics, vol – 37, issue 3, pages 206-210.
- [10] C.J. Groubler et al, self reported work related Musculo Skeletal Anjuries and Isometric Handgrip Strength, Oxford Journals of Health and Medicine, 2013, vol. 63, issue 3, pp 210-216.
- [11] Classification of Dental Instruments, Arkansal Tech University, 2017.
- [12] David W. Rising et al, Reports of Body Pain in a Dental Student Population, 2005, vol.136,issue-1,pages 81-86.

Volume 9 Issue 8, August 2020

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

ResearchGate Impact Factor (2018): 0.28 | SJIF (2019): 7.583

- [13] Deepak Sharan, Mathankumar et al., Work Related Musculoskeletal Disorders among Dentist, Nordic Ergonomics Society Annual Conference- 46, 2014.
- [14] "Dental Excavators", www.dechetan.com, 2017.
- [15] Dr. David .J et al., "The Eight Keys to Selecting Great Seating for Long Term Health".
- [16] Eman Samil Fayez, et al (2014)., Neck Pain And Hand Grip Strength In Dentists If Saudi Arabia, International Journal Of Innovation And Applied Studies ISSN 2028 – 9324, vol.9, no.2,pp 665-661.
- [17] Gavin Marrison et al (2017), Neck Strengthening Exercises, Journal of Spine Health.
- [18] Global year against musculoskeletal pain, International Association for the Study of Pain, Oct, 2009.
- [19] Helen C. Roberts and Haylay J. Martin et al (2011), A Review Of The Measurement Of Grip Strength In Clinical And Epidemiological Studies Towards A Standardized Approach, Oxford University, Behalf Of The British Geriatrics Society.
- [20] http://en.Wikipedia.org/wiki/head and anatomy
- [21] http://en. Wikipedia.org/wiki/dental instrument
- [22] http://www.healthline.com/human-body-maps/neck
- [23] http://www.medscape.com/article/1968303-review
- [24] http://www.spine health.com
- [25] Jolanta Szymanska, Diaorders Of The Musculoskeletal System Among Dentists From The Aspect Of Ergonomics And Prophylaxis, Annual Of Agricultural And Environmental Medicine, 2002, vol. 9, 169-173
- [26] M. J. Hayas and D. Cockrell et al., (Sep,2009), A Systemic Review of Musculoskeletal Disorders among Dental Professionals, International Journal Of Dental Hygiene.
- [27] Occupational Therapy and Pain Rehabilitation, the American Occupational Therapy Association (AOTA).
- [28] "OT Assessment Index", Mental Health 4 Occupational Therapy
- [29] R. D. Kilgour et al., (2013), Hand Grip Strength Predicts Survival And Is Associated With Markers Of Clinical And Functional Outcomes In Advanced Cancer Patients, Supportive Care In Cancer, vol. 21, issue-2, pp 3261-3270.
- [30] Rebecca Harkin et al.,(2017), Musculoskeletal Therapy.
- [31] Rebecca L. Von Dee Hayde et al., (2011) Occupational Therapy Interventions For Shoulder Conditions: A Systematic Review, American Journal of Occupational Therapy, vol.65, 16-23.
- [32] R. Nutalapati, R. Gaddipati et al., (2009), Ergonomics in Dentistry And The Prevention Of Musculoskeletal Disorders In Dentists, International Journal Of Occupational Health, Vol.1, 2009.
- [33] Sleven G. Yeomans et al., (2014), Spinal Manipulation For Cervical Joint Dysfunction, Spinal Health.
- [34] S. Vijay and M. Ide et al., Musculoskeletal Neck And Back Pain In Undergraduate Dental Students At A Uk Dental School- Across Sectional Study, British Dental Journal, vol.221, no.5, 2016
- [35] T. Nandhini et al., Cervical Neck Pain- a Review, Journal of Pharmaceutical Sciences and Research, 2014, vol.64,210-212.
- [36] Work force trends in Occupational Therapy, American Journal of Occupational Therapy Association.

Websites

- [37] www.dechetan.com
- [38] www.google.com
- [39] www.graphpad.com
- [40] www.medscape.com
- [41] www.midline.com
- [42] www.otseeker.com
- [43] www.pubmed.com
- [44] www.sagejournals.com
- [45] www.spinehealth.com
- [46] www.wisegeek.com

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