Teens

Official Journal of Child Development Centre on Child & adolescent Care and Development

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CONTENTS

Editorial

The digitalization of young children is happening in this era of 21st century. People often consider usage o screen by very young children as a credit and the parents are proud about it. But the hidden dangers in the use is not foreseen by them. Screen time is an inescapable reality of modern childhood with kids of every age spendinghours upon hours in front of I pads, smartphones, computer, laptops and television. The parentsthink that screen time will help the child to learn something. Screen time is not a factor among many of those which includes the healthy environment of the child.

The screen time appears to impair brain structure to function, main damage occurs in the frontal lobe.Screen time causes physical and developmental problems. The physical problems includesore, irritated and dry eyes and fatigue. It may also cause obesity due to lack of physical activity.Theproblems include delayed language and social skills. This is because the children needreal life interactions to develop these skills. Screen time increases a child risk of becoming inattentiveaggressive and less able to self soothe.

High exposure to background television has been found to negatively affect language use andacquisition, attention, cognitive development and executive function in young children. It also reducesthe amount and quality of parent-child interaction and distracts from play. Some studiesassociated prolonged television viewing with lower cognitive abilities, especially related to short-termmemory,early reading and math skills and language development. The inability of youngchildren(below 2 years)to distinguish everyday reality from what happens on screen along with theirefforts to make sense of competing experiential realms, may interfere with and impede executivefunction.

Parents decision making with their young children(from birth to 2 years) was influenced by a widerange of factors,including parents using screens as a coping tool or to occupy their child while doinghousehold chores, the ease and availability of screen time and the fact that their child enjoyed screentime.

American academy of pediatrics identified the health implication of increased screen time and in 1999 they addressed the issue in their policy document and suggest pediatricians to communicate with the parent to limit the screen time under the age of two years. After 17 years they again reaffirm the policy in 2016 and recommended no screen time for children under the age of 18- 24 months except video chatting and the time should be less than 1 hour per day for children ages 2-5 years.

Effect of screen media on children ages 0-6 years is profound and immediate attention and concern must be provided to reduce the exposure time by effective education and counselling to parents and health care providers. The awareness of the parents should be raised in this regard.

Dr Babu George

Director

Influence of screen time on children aged between 0-6 years of age

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Abstract

Child's environment is critical in promotion of healthy development of the child. The natural; development of a child occurs through appropriate interaction with the parents and care givers. The young children seem to depend on electronic media including smart phone technology. The screen time defined as spending more time in television, mobile phones, computers and video games is considerably increasing with children aged 0-6 years. Various professional bodies including American Academy of Pediatrics have identified the health implications of increased screen time among children. Screen time is influenced by multiple factors which includes the age of the child, ethnicity, family characteristics, home environment and the parental environment. The early exposure may contribute problems in the later life and it affect physical, intellectual linguistic and all other cognitive functions. In addition to that it increases the risk for cardiovascular problems among children indirectly through increased Body Mass Index.

Key words: screen time, media use, young children, language, cognitive function, parenting

Introduction

Childhood is a period of intensive growth and development. The changes that takes place in the child environment make large impact on the entire life process. A robust body of literature suggest the importance of child's healthy environment characteristics that promote the healthy development of the child. They are naturally sociable, curious and try to communicate with the surroundings through eye contact, movements, sounds and facial expression. However, the natural development of such potentials only happens through interaction with parents and other care givers through various plays and communication that helps to nurture the curiosity, exploration and learning (1,2).

From built in DVD players in minivans to smart phone technology the young children in today's society is more depend on electronic media than those of any previous generation (3) and this current trend in children life's such as spending time in television, mobile phones, computers and video games etc. is collectively defined as "screen time" (4). Multiple studies are reporting the impact of screen time in child life (4–7) Here this article focused on the age group of 0-6 years of age. American academy of pediatrics identified the health implication of increased screen time and in 1999 they addressed the issue in their policy document and suggest pediatricians to communicate with the parent to limit the screen time under the age of two years (3) After 17 years they again reaffirmed the policy in 2016 and recommended no screen time for children under the age of 18- 24 months except video chatting

and the time should be less than 1 hour per day for children aged 2-5 years (8).

Magnitude of the problem

The magnitude of exposure to various screen time media is varied, however TV becomes most commonly used media for watching content and is still follow the same trend over the past ten decade (9). Currently 90 percent of parents report that children younger than 2 years watch some form of electronic media and by 3 years of age all most all the children have a TV in their bedroom. Parents view this as a peacekeeper/ and time saving activity through engaging their child and think that its help the child to develop especially when they watch educational television (3,10).

According to recent statistics an average child aged 0-23 months watch television at least 55 minutes and is around 90 minutes while considering 2-4 years of age. Mobile phone use is comparatively high in recent times and around 38 percent of children less than 2 years of age now use a mobile device. The percentage is directly proportional to the age of the child (2). Now a days thousands of apps available in mobile phones and internet that exclusively focusing on early childhood to dismay there is no substantial evidence to support the positive educational benefits of screen media on children (11)

According to various studies quoted in a European Union study report states that 50 percent of Swedish children ages 3-4 years use tablet computers and 25 percent use smartphones and in Norway, 23 percent of children have access to touch screen at home and around 32 percent first using touchscreen before the age of 3 years (12) and 36 percent of household having young children where the TV is on most or all of the time (11). A

Korean study reported that about 65 percent of children were exposed to screen media before 24 months and 12.2 percent of children exposed before 12 months. Before 24 months of age 31.3 percent of children were using smartphones (13)

Young children screen access and use

Among 3- to 4-year-olds:

- 1% have their own smartphone, 21% have their own tablet
- 96% watch television on a television set, for around 15 hours a week
- 40% play games on a digital device, for nearly 6 hours a week
- 53% go online, for nearly 8 hours a week, mostly on a tablet
- 48% use YouTube; of those, 52% prefer cartoons and 15% unboxing videos

Among 5- to 7-year-olds:

- 5% have their own smartphone, 35% have their own tablet
- 95% watch television on a television set, for around 13.5 hours a week
- 40% play games on a digital device, for nearly 7.5 hours a week
- 79% go online, for around 9 hours a week, mostly on a tablet
- 71% use YouTube; of those, 30% prefer cartoons and 18% funny videos or pranks (9)

Foreground and background media

Programs that are intended to build for children is termed as foreground media while some children are exposed to programs other than intended for

their view is termed as background media (3). Here the media displacement effect have positive outcomes, because it displaces the less valuable items (14).While considering infants and toddlers the attention pattern is variable and they do not comprehend until about 18 to 24 months. Since the television use among such children have negative displacement effect such as they miss the opportunity to interact with the real world and it affect the cognitive development (15).

Determinants of screen time among children aged 0-6 years

Sociodemographic characteristics

1.Age and sex of the child

A birth cohort study conducted to assess the amount of daily screen time in children 18 months of age shows that around 40 percent of children at this age group had more than two hours of screen time per day (4) The finding is again supported by a tri ethnic Singaporean mother offspring cohort study, the substantial increase in screen viewing time increases in early childhood, especially from age 2 to 3 years and is largely in hand held devices viewing time. In the early ages the television is the common screen and few children used computer at that age (16)

Gender difference in screen time is evident and significant of this in early years of life and screen time is not much studied. Systematic review done to find out the correlates of screen time were also report that there is no association between screen time and gender in early years of life especially 0-36 months (17) However studies shows that the being male child have the higher odds of using a screen media than girl child (18).

2.Ethnicity

Ethnicity is the state of belonging to a group who have the same national, racial or cultural origin (19). It is a factor that have influence in child screen time. Studies reported the strong association between screen time and ethnic differences (17,18). In an observational study Chinese ethnicity shows strong association with lower level of screen time less than 2 hours per day. In a systematic review done by Helen et.al (2013) more than 70 percent of studies reported higher screen time among children under 3 years of age in ethnic minority groups (17). Another study based in UK (predominantly white British and Pakistani) in a sample of children aged from 6- 36 months old, found out that the children born to Pakistani heritage have higher screen viewing by 36 months (20).

3.Family characteristics

Family characteristics such as the employment status of parents, the presence if siblings and grandparents have influence in child overall development. Multiple studies reported the influence of these characteristics in screen time of young children. In a systematic review the finding indicate that increased access to cognitive stimulation in the home environment was negatively associated with screen media exposure among children 0-36 months of age and the (17). The socioeconomic influence of screen time in very young children is not much studied however, one study conducted among 6-11 years of age found out that screen viewing was more among lower socioeconomic status and its varied from 1.7 hours/ day to 2.4 in low socioeconomic status families(21).

The difference is mainly due to the presence of greater media access in low socioeconomic family and the increased outdoor play equipment's in high income families (22)

Employment status of mother and father, the number of siblings were other sociodemographic factors significantly associated with screen time use and access (4).

4.Home environment

4.1.Parenting practices

A growing body of research shows weak and mixed evidence of parental influence in screen time of young children. In a systematic review the findings shows that parental perception regarding the Television affect the child screen time. If the parent consider it has benefits then its increases the screen time. In addition to that screen time rules in the family have mixed influence in screen time. In some families the restrictions become the reason for increased screen time (23) while studies also shows authoritative parenting style limit the screen time use as compared with indulgent or neglectful style (6,23).

Parenting practices of mother and father influence the screen time use among children aged 1.5 to 5 years. Study based on a Canadian family based cohort shows that mothers screen time modeling, meal time screen use and use of screens to control behaviour (Significant number of parents use screen device as a discipline tool, to reward the children for their good behaviours and limit the time as a punishment of bad behaviours(24)) are positively associated with screen time and mothers practice of monitoring and limiting screen time were negatively associated with children screen time (17,21).Considering, father the meal time it increases the weekday screen time while fathers monitoring and screen time ruling reduced the screen time (25).
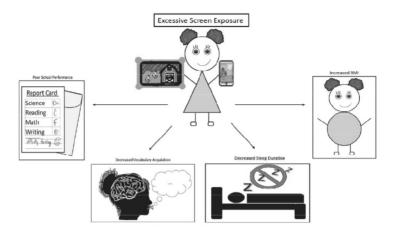
4.2 Parental involvement

Study conducted among children aged 15 months of age shows that the involvement of parents while the child is watching a touch screen media improve the toddler's transfer of learning from device to the real world. However, findings suggest that more than half of the children (66.6 percent) had no parent child interaction during the exposure (26) Studies also report that children younger than three years of age generally learn less from 2D sources including television, touchpad devices, and books compared to real objects and events (27). A longitudinal study conducted using 5 year follow up data from a trial undertaken in Australia from 2007-2013 aimed to assess the modifiable risk factors of screen time, revealed that mothers involvement in child's outdoor play activity and screen time at one year of age and predicted children's daily, weekly and weekend day outdoor play time during the age of 2 to 5 years (23)

4.3 Early exposure to screen media

As the age increases the amount of time the child spend in screen media increases (18). A study based on data from a national longitudinal survey of youth, during 1990 to 1998 assess the influence of television viewing in the early years (0-35 months of age) and the pattern in 6 years of age, study shows that children who watch TV more than two hours a day follow the same pattern at the age of six years (20)

Study assessed the early screen exposure and the health outcomes give the evidence of decreased cognitive abilities, decreased growth, addictive behaviour, poor school performance, increased obesity and poor sleep (28)

Effect of screen time on child

1. Language development

Language development is directly linked to the amount of time parents and other family members spend with the child. The excessive screen time act as a barrier for communication and thus it negatively affect the language development of the child (29). Study aiming at impact of early exposure to screen media on language development and autistic like behaviour, revealed that children spent greater than or equal to 3 hours in electronic screen had language delay, short attention span and hyperactivity (26)

Quality of the programme content have implication in language development of a child (2). Researchers concluded that programs in which one screen characters such as 'Dora the explorer' which directly speak to the child and elicit communication, participation and provide opportunity to respond are positively associated with language production and vocabulary (30) it's also true for the story books that tell the stories through written verbatim and provide colorful visuals of the particular events (2) (Balarama, Kalikkudukka, poompatta etc.)

Implications

1. When children are watching TV accompany them and make the experience socially interactive, ask questions, label and provide description of what they are seeing and interpret the content that help the children to expand their learning.

2. Make connection between what they see on screen and in real world, for example child watched the counting of numbers in a show and then the parent incorporate it in real child environment such as help the child to count such as counting the steps to get to the car, counting the items etc.

3. Take an interactive approach with all 2D objects, robust body of literature give the importance of parental involvement in screen use and its positive effect, since parents should spend time with the child to make the session more lively

4. Limit the screen time through other activities that make the child engaged such as play,

appropriate for the age.

5. Screen time rules in the family have both positive and negative impact, since the rule should be liberal and try to avoid night time viewing that compromise the sleep.

6. Select the screen programs cautiously, consider the age and developmental needs of the child

2. Influence of background Television in children

Researchers believe that whenever the child exposed to background TV, they can't understand what is going on, since the scenes and characters are appearing fast and the language is much complex, if the exposure happening an average of 5 and half hours per day the child's cognitive functioning may be continuously challenged cause negative effects (2). One of the studies conducted to assess the influence of background television in very young child toy play behaviour, revealed that background television significantly reduce the toy play episode length and focused attention during play even if the child look on the background TV less than ones per minute (31).

Implications

1. Avoid TV in the back ground when the children are playing

2. Turn off the screen if no one is watching

3. Plan the TV schedule for adult to limit the background TV among children

3. Sleep

Sufficient sleep is essential for children to attain their maximum growth and development. Multiple studies reported the health impact of poor quality sleep among children as well as adults. The presence of screen media in bedroom have significant influence on children screen time (32,33). In a meta-analysis finding suggest strong relation between bedtime media device use and inadequate sleep quantity, quality and excessive day time sleepiness (34).

Implication

1. Limit the screen time at night and avoid placing TV and other screen devices (mobile phones, tablets) in the child bedroom

2. Maintain proper sleep hygiene during sleeping, avoid background noises from screen media

3. Limit media in the hour or two before bedtime, as it can be stimulating and making it hard to calm themselves to go sleep

4. Do not expose violent screen content to young children

4. Screen media on physical health

Obesity is one of the most challenging public health concern faced by both developing and developed countries. Obesity is one of the best documented evidence of screen media exposure. Many observational and experimental studies reported the evidence of obesity among high screen viewers (35) and the risk for overweight developed in the early years of life due to high screen time persist in later life (36). In a study assessing the TV viewing and weight status from kindergarten to first grade the study shows that, weekly TV viewing and obesity (BMI) follow a dose response relationship (37). However, some studies reported the positive effect of screen media on physical health of the child, these promote physical activity through the rhymes and dances developed for children, and it is enjoyed by the kids especially after 3 years of age (35).

5.The radiation exposure

Mobile or cell phones become an integral part of modern telecommunication and in many countries the market is booming with more than half of the population using mobile phones (38). These devices emit non-ironizing radiation, which can be absorbed by tissues close to the phone and

the impact of this exposure may varies according to the technology of phone, the distance between phone and the user and the distance from the cell phone tower (39).In the past few years the number of international health agencies contributed to the debate over cellphone radiation and its possible health impact especially the risk for cancer. The national Cancer institute, part of the United Nations world health organization put forward the assumption that a family of frequencies that include the mobile phone emission possibly carcinogenic to human (40). Impact of radiation and the effect is more predominant in children especially young children, the exact mechanism for this vulnerability is not known, it is likely to be linked to increased cell division and growth during these age (41).

Screen time guidance for parents

The revised screen time guidance from the American Academy of Pediatrics (AAP) (Council on Communications and Media, 2016, based on an evidence review by Chassiakos et al, 2016) remains the main internationally cited authority.

The guidance states that:

1. Infants and toddlers should have no screen exposure, except for interactive video chats.
2. From 18 months, high-quality television content is acceptable, provided a parent watches with the child.
3. For 2- to 5-year-olds, screen time should be limited to one hour per day, again, with parents present to help to interpret the content.
4. Families should develop a 'media plan' (the AAP provides an interactive tool), including designated 'media-free' times.
5. Rather than controlling their child's media use, parents should act as their child's 'media mentor', including managing their own screen time as a model for their child.

(Australian Government Department of Health

(2017) and Canadian Pediatric Society (2017)

Recommendations

Based on the evidences gained from the literature here some recommendations are suggested for health care providers and parents of young children to mitigate and reduce the risk of screen time effect on children.

Minimize screen time

- Screen time for children younger than 2 years is not recommended
- Limit routine screen time less than 1 hour per day for children 2-5 years of age
- Maintain daily 'screen free' times, especially for family meals
- Avoid screen time for at least 1 hour before bedtime

Mitigate the risk associated with screen time

- Be present and engaged when screens are used and co-view with children
- Be aware of content and prioritize educational, age appropriate and interact programming
- Use parenting strategies that teach self-regulation, calming and limit setting

As a family, be mindful about the use of screen time:

- Conduct an assessment of current screen practices and habits and develop a family media plan for the entire family.
- Help the children to understand the problematic content and provide proper explanation
- Be reassured that there is no evidence to support introducing technology at an earlage

Adults should model healthy screen use:

- Choose healthy alternatives, such as reading, outdoor play and creative, hands-on activities.
- Turn off the devices at home during family

time.

- Turn off screens when not in use and avoid background TV.(36)

Conclusion

Effect of screen media on children ages 0-6 years is profound and immediate attention and concern must be provided to reduce the exposure time by effective education and counselling to parents and health care providers. Screen time is influenced by multiple factors and the effect varies. The early exposure may contribute problems in the later life and it affect physical, intellectual linguistic and all other cognitive functions. In addition to that it increases the risk for cardiovascular problems

among children indirectly through increased BMI.

Reference

1. D P. Factors Affecting Early Childhood Growth and Development: Golden 1000 Days. Adv Pract Nurs [Internet]. 2016 [cited 2019 Jan 5];01(01). Available from: https://www.omicsonline.org/open-access/factors-affecting-early-childhood-growth-and-development-golden-1000days-APN-1000101.php?aid=66362

2. Lerner C. Screen Sense: Setting the Record Straight. 2014;10.

3. AAP A. Media Use by Children Younger Than 2 Years. Pediatrics. 2011 Nov 1;128(5):1040–5.

4. Chandra M, Jalaludin B, Woolfenden S, Descallar J, Nicholls L, Dissanayake C, et al. Screen time of infants in Sydney, Australia: a birth cohort study. BMJ Open [Internet]. 2016 Oct 24 [cited 2019 Jan 4];6(10). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5093377/

5. Christensen MA, Bettencourt L, Kaye L, Moturu ST, Nguyen KT, Olgin JE, et al. Direct Measurements of Smartphone Screen-Time: Relationships with Demographics and Sleep. PLoS ONE [Internet]. 2016 Nov 9 [cited 2019 Jan 4];11(11). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5102460/

6. Veldhuis L, van Grieken A, Renders CM, HiraSing RA, Raat H. Parenting Style, the Home Environment, and Screen Time of 5-Year-Old Children; The 'Be Active, Eat Right' Study. Allen P, editor. PLoS ONE. 2014 Feb 12;9(2):e88486.

7. Dauw JM. Screen Time and the Effects on Development for Children Ages Birth to Five Years. :49.

8. American Academy of Pediatrics Announces New Recommendations for Children's Media Use [Internet]. 2016 [cited 2019 Jan 5]. Available from: https://www.aap.org/en-us/about-the-aap/aap-press-room/Pages/American-Academy-of-Pediatrics-Announces-New-Recommendations-for-Childrens-Media-Use.aspx

9. Ofcom ofcom. Children and Parents: Media Use and Attitudes Report. 2017;306.

10. Zimmerman FJ, Christakis DA, . Meltzof AN. Television and DVD/Video Viewing in Children Younger Than 2 Years. 2007; Available from: https://pdfs.semanticscholar.org/3e42/f5ca8831c58f4876ba92f-26000c3b257cb03.pdf

11. Hanson K. The influence of early media exposure on children's development and learning. 2017;151.

12. Young children and their internet use [Internet]. London: London School of Economics and political science; 2013. Available from: http://eprints.lse.ac.uk/52630/1/Zero_to_eight.pdf

13. 13Chang HY, Park E-J, Yoo H-J, Lee J won, Shin Y. Electronic Media Exposure and Use among Toddlers. Psychiatry Investig. 2018 Jun;15(6):568–73.

14. Hanson K. The influence of early media exposure on childrens development and learning. :151.

15. Nabi RL, Oliver MB. The SAGE Handbook of Media Processes and Effects [Internet]. SAGE; 2009.

657 p. Available from: https://books.google.co.in/books?id=NmpHjF-XU5AC&pg=PT519&lpg=PT519&dq=media+displacemment+effect+in+young+children&source=bl&ots=5hn-pmL0Muc&sig=epl-TasuS3ZBRFbOfAe5HfjAS4s-&hl=en&sa=X&ved=2ahUKEwij5LyH0-LfAhXSSH-0KHaAfDQsQ6AEwCnoECAAQAQ#v=onepage&q=media%20displacemment%20effect%20in%20young%20children&f=false

16. Bernard JY, Padmapriya N, Chen B, Cai S, Tan KH, Yap F, et al. Predictors of screen viewing time in young Singaporean children: the GUSTO cohort. Int J Behav Nutr Phys Act [Internet]. 2017 Sep 5 [cited 2019 Jan 10];14. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5584344/

17. Duch H, Fisher EM, Ensari I, Harrington A. Screen time use in children under 3 years old: a systematic review of correlates. Int J Behav Nutr Phys Act. 2013 Aug 23;10:102.

18. Hoyos Cillero I, Jago R. Sociodemographic and home environment predictors of screen viewing among Spanish school children. J Public Health Oxf Engl. 2011 Sep;33(3):392–402.

19. ETHNICITY | meaning in the Cambridge English Dictionary [Internet]. 2018 [cited 2019 Jan 11]. Available from: https://dictionary.cambridge.org/dictionary/english/ethnicity

20. Certain LK, Kahn RS. Prevalence, Correlates, and Trajectory of Television Viewing Among Infants and Toddlers. Pediatrics. 2002 Apr 1;109(4):634–42.

21. Downing KL, Hinkley T, Salmon J, Hnatiuk JA, Hesketh KD. Do the correlates of screen time and sedentary time differ in preschool children? BMC Public Health. 2017 29;17(1):285.

22. Tandon PS, Zhou C, Sallis JF, Cain KL, Frank LD, Saelens BE. Home environment relationships with children's physical activity, sedentary time, and screen time by socioeconomic status. Int J Behav Nutr Phys Act. 2012 Jul 26;9:88.

23. Xu H, Wen, LM, Rissel, Chris. Associations of Parental Influences with Physical Activity and Screen Time among Young Children: A Systematic Review. 2014; Available from: https://pdfs.semanticscholar.org/10a2/b928d8035051d05b5eed55f6162624885fb7.pdf

24. Hawi NS, Rupert MS. Impact of e-Discipline on Children's Screen Time. Cyberpsychology Behav Soc Netw. 2015 Jun 1;18(6):337–42.

25. Tang L, Darlington G, Ma DWL, Haines J. Mothers' and fathers' media parenting practices associated with young children's screen-time: a cross-sectional study. BMC Obes [Internet]. 2018 Dec 3 [cited 2019 Jan 10];5. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6276169/

26. Hermawati D, Rahmadi FA, Sumekar TA, Winarni TI. Early electronic screen exposure and autistic-like symptoms. Intractable Rare Dis Res. 2018 Feb;7(1):69–71.

27. Ho A. Parental Spatial Input During Parent-Child Interactions: A Two-Dimensional versus a Three-Dimensional Learning Experience. 2015;198.

28. Wolf C, Wolf S, Weiss M, Nino G. Children's Environmental Health in the Digital Era: Understanding Early Screen Exposure as a Preventable Risk Factor for Obesity and Sleep Disorders. Child Basel Switz. 2018 Feb 23;5(2).

29. Cristina Kuta. The Negative Impact of Excessive Screen Time on Language Development in Children Under 6-Years-Old: An Integrative Review with Screen Time Reduction Toolkit and Presentation for Outpatient Pediatric and Family Health Providers [Internet]. 2017. Available from: https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1126&context=nursing_dnp_capstone

30. Linebarger DL, Walker D. Infants' and toddlers' television viewing and language outcomes. Am Behav Sci.

31. Schmidt ME, Pempek TA, Kirkorian HL, Lund AF, Anderson DR. The effect of background television on the toy play behavior of very young children. Child Dev. 2008;1137–1151.

32. LeBourgeois MK, Hale L, Chang A-M, Akacem LD, Montgomery-Downs HE, Buxton OM. Digital Media and Sleep in Childhood and Adolescence. Pediatrics. 2017 Nov;140(Suppl 2):S92–6.

33. Buxton OM, Chang A-M, Spilsbury JC, Bos T, Emsellem H, Knutson KL. Sleep in the modern family: protective family routines for child and adolescent sleep. Sleep Health. 2015 May 1;1(1):15–27.

34. Carter B, Rees P, Hale L, Bhattacharjee D, Paradkar MS. Association Between Portable Screen-Based

Media Device Access or Use and Sleep Outcomes: A Systematic Review and Meta-analysis. JAMA Pediatr. 2016 01;170(12):1202–8.

35. Robinson TN, Banda JA, Hale L, Lu AS, Fleming-Milici F, Calvert SL, et al. Screen Media Exposure and Obesity in Children and Adolescents. Pediatrics. 2017 Nov;140(Suppl 2):S97–101.

36. Canadian Paediatric. Screen time and young children: Promoting health and development in a digital world | Canadian Paediatric Society [Internet]. 2017 [cited 2019 Jan 14]. Available from: https://www.cps.ca/en/documents/position/screen-time-and-young-children

37. Peck T, Scharf RJ, Conaway MR, DeBoer MD. Viewing as little as 1 hour of TV daily is associated with higher change in BMI between kindergarten and first grade. Obesity. 2015;23(8):1680–6.

38. Zahid Naeem. Health risks associated with mobile phones use [Internet]. 2014 [cited 2019 Jan 14]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4350886/

39. Vilkow N, Tomas D, Wang G-J. Effects of Cell Phone Radiofrequency Signal Exposure on Brain Glucose Metabolism [Internet]. 2011 [cited 2019 Jan 14]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3184892/

40. AAP. AAP, dedicated to the health of all children [Internet]. 2013. Available from: https://ecfsapi.fcc.gov/file/7520941318.pdf

41. WHO. children and radiation [Internet]. 2009. Available from: https://www.who.int/ceh/capacity/radiation.pdf

Professional perspective of functional status of casualty services in Government Medical College, Thiruvananthapuram

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Abstract

A medical emergency is an unforeseen injury or illness (physiological or psychological) requiring immediate medical care Emergency care for the patient is vital and thus the current situation of existing emergency services including, human resources, infrastructure and other resources need to be studied. This study aims to look into the functioning of the casualty Department in the Medical College, Thiruvananthapuram from a professional point of view. The study sample constituted of professionals – Doctors and Nurses working in the Casualty. This study was conducted using a structured questionnaire. A total of 38 professionals participated in the study. Three fourth of the professionals reported that they were dissatisfied with the overall services at the Casualty. The problems with infrastructure as well was inadequacy of the staff, medicine, equipment and deficiency of other resources were highlighted in the study. The services at the casualty need to be well planned to accommodate the varying needs of the beneficiaries as well as the professionals.

Key Words: Patient satisfaction, emergency service, hospital, health care quality, casualty services

Introduction

A casualty is any event resulting in a large number of victims enough to disrupt the normal course of emergency and health care services (PAHO/WHO 2001). Mostly, such incidents are marked by a relatively sudden and dramatic event that causes a surge in number of patients and covers a wide range of incidents of varying degrees of severity. The emergency care services in India are in nascent stage. The National Health Policy 2002 has highlighted the increasing burden of disease due to accidents and envisaged setting up of trauma care centres and fully-equipped 'hub-spoke' trauma care networks in urban areas of the country. At the professional level, the emergence of emergency medicine as a recognized academic specialty in developed countries and international collaborations in this area has fostered increasing interest in emergency care among clinicians in developing countries like India(1). A medical emergency is an unforeseen injury or illness (physiological or psychological) requiring immediate medical care. The individual may be in danger of loss of life or health impairment, or may be incapacitated or helpless as a result of a physical or mental condition. Emergency medical care focuses on the provision of immediate or urgent medical interventions to stabilize such patients and prevent death and disability. Poisonings may either be due to food, water and alcohol consumption. Outbreaks of disease can quickly outstrip the ability of local health care facilities to contain and treat them. Most vibrant among the public view are the natural disasters that endanger both the populations and environments such as floods, windstorms, and earthquakes. Time is one of the most important factors relating to patient outcome in emergency situations.

Emergency department is considered as an important section for hospital care. Trauma patient experiences only the emergency department for initial treatment. During life threatening conditions, emergency departments in tertiary care centers offers fast diagnosis and treatment. This department provides both clinical and para-clinical services in emergency situation (2).

The apprehension of the patients and/or the accompanying persons at the time of trauma or emergency can be reduced by timely and prompt treatment as it becomes the need of the hour. The availability of treatment and accessibility of related

supportive facilities will be a boon to the patients and their attendants. The accident and emergency department of the hospital has a key role to play in this regard (3). The effectiveness of current practices, guidelines, resource allocations and system capabilities shall be studied(1).

Objectives

1. To evaluate the functioning of the Casualty Department in the Medical College, Thiruvananthapuram in the perspective of the medical professionals.
2. To assess the insufficiencies if any, with regard to the functioning of the casualty Department in the Medical College, Thiruvananthapuram.

Materials and methods

This study was a descriptive study conducted at Casualty Department of Government Medical College, Thiruvananthapuram. The study sample constituted of professionals – Doctors and Nurses working in the Casualty. This study was conducted using a structured questionnaire. All the professionals currently working in the casualty for at least a month and who consented to participate in the study were included in the study. The total sample size was 38, which included 16 doctors, 22 Nurses.

Results

A total of 38 professionals and beneficiaries participated in the study. The results are summarized below. The professional participants included 16 doctors and 22 nurses (table 1).

Table 1: Age and gender distribution of the participants

	Doctors N (%)	Nurses N (%)
Age Distribution		
Less than 25	0	4 (18.2)
25 to 35	10 (62.5)	10 (45.5)
35 to 45	6 (37.5)	6 (27.3)
45 and above	0	2 (9.1)
Gender		
Male	11 (68.8)	2 (9.1)
Female	5(31.3)	20 (90.9)
Total	16 (100)	22 (100)

Majority of the doctors were in the age group 25-35 years and about 69 percent of them were male. Nearly 46 percent of the Nurses were in the age group 25-35 and more than 90 percent of them were female.

Table 2: Views of Professional group of participants (Doctors and Nurses)

	Services/Facilities in the Casualty	Satisfied	Dissatisfied
A	Overall services provided in the casualty	24.0%	76.0%
B	Services of Casualty attenders	39.5%	60.5%
C	Lab/x-ray/scanning services inside the casualty	23.7%	76.3%
D	Casualty Pharmacy Services	24%	76%
E	Nursing Services	63.2%	36.8%
F	TOILET/BATHROOM FACILITIES	10.5%	89.5%
G	SECURITY SERVICES	15.8%	84.2%
H	ENQUIRY SERVICES	52.6%	47.4%

a. Services provided in the casualty

Only 23.7% of the professionals were satisfied with the overall services provided in the casualty. The rest of 76.3% were unconvinced with the services (Table 2). Majority of the participants reported that the insufficiency of staff and equipment were the reason for underperformance of the casualty services. One also reported that the inappropriate practice of receiving the patient was one of the reasons for its underperformance.

b. Satisfaction with services of casualty attenders/nursing assistants

With regard to the services provided within the casualty by attendant or nursing assistants, the professionals are only satisfied to 39.5%. However, 60.5% of the participants seems to be displeased. The reason for dissatisfaction are due lack of training (34.8%) and unavailability in time (34.8%).

c. Satisfaction of Laboratory Services in Casualty

With regard to the laboratory, X-Ray and scanning services, only 23.7% of the professionals were satisfied and rest of 76.3% were unhappy with their functioning. The main reasons of underperformance with regard to laboratory services (shown in table) is due to insufficient staff (37.9%), insufficient staff and equipment (13.8%), insufficient equipment (10.3%), insufficient equipment and delayed results (10.3%), insufficient staff, equipment and delayed results reported by 10.3% and delayed results (10.3%), insufficient staff and delayed results (6.9%).

d. Pharmacy Services

Regarding Pharmacy services, 26.3% responded satisfactorily, however the majority of the professional were unsatisfied (74%). The reasons for underperformance of pharmacy services among professionals were due to insufficient medicines (42.9%), many also responded a combination of insufficiency of staff, medicine and high patient density as a reason for underperformance and 7.1% reported the reason as solely due to lack of staff.

e. Nursing Services

From a professional view point, 63.2% of nursing services were satisfied and only 36.8% were not satisfied with it. The reasons for underperformance of nursing staffs as reported by professionals is due to insufficient staff, medicine and density of patients (42.9%), insufficient staff and patient density by 21.4% and due to poor performance from the staff members (7.1%).

f. Toilet/Bathroom Facilities

With regard to the satisfaction with toilet or bathroom facilities among professionals, only 10.5% were satisfied with the toilet facilities being provided and 89.5% were unsatisfied with the facility being provided. The professionals were unsatisfied due to reasons owing to density of patients by 23.5%, due to lack of adequate number of toilets/facilities and lack of hygiene by 17.6%. All of the above reasons were quoted among 20.6% of the professionals.

g. Security Arrangements inside Casualty

About the security services provided inside the casualty, only 15.8% of the professionals gave satisfactory opinion, however 84.2% of the professionals were displeased. The main reasons for underperformance as pointed out by professionals are due to high patient density and insufficient staff by 21.9%, dearth of enough staff (18.8%), lack of space (15.6%) and due to adequate space and staff (6.3%) and all the above reasons were reported by 15.6% of the participants.

h. Performance of Enquiry Services

The performance of enquiry services inside the casualty was reported to be satisfactory by 47.4% of the professionals and 52.6% of the professionals were dissatisfied with it. When asked about the reason for dissatisfaction, 30% of the respondents are of the opinion - due to lack of network in causality, 20% said-because of lack of experienced staff, 15% says it is because of the lack of networking insufficiency and high density of patients and 5% says due to high density of patients and lack of expertise.

Discussion

The most dissatisfaction was with the observatory services and toilet facilities in the casualty as reported by the professionals. Lab/x-ray/scanning services inside the casualty and Casualty Pharmacy Services were also reported to be inadequate by the professionals. The building infrastructure as well was inadequacy of the staff, medicine and equipment were highlighted in the study. It also showed that the available resources are not enough to cater to the increased number of patients. There are studies reporting inadequate staff, equipment and infrastructure in the casualty of government as well as private hospitals in India(4). Studies from India also shows that availability of consultant in triage area, improvements in communication, quick service at the Casualty Pharmacy, reducing the perceived waiting times at various levels and improvement in the ambience of the unit would further enhance the patient satisfaction (5). Studies assessing the satisfaction of professionals with health care services are not available from India. In another study conducted in Iran it was found that 70% of the participants were dissatisfied with the emergency department(6). A study on factors affecting patient satisfaction with emergency department care done in Italy highlighted important areas of nursing care on which to initiate improvements such as explaining patients the colour waiting list, and communication towards patients(7).

Studies point out that inadequate spending in the emergency care at the hospital is one of the probable reasons for the underperformance of the casualty services(8). The public health system of India has only recently introduced emergency department as a speciality service(9). There is lack of emergency medicine (EM) specialists in India and also the post-graduation courses in EM have not gained foot in our medical education system so that the emergency services inside the hospital are well coordinated(10).

Conclusion

It is inevitable to have sufficient services including human resources, infrastructure in the casualty.

The finding that the staff themselves are dissatisfied with the various services provided needs to be seriously taken care of. To further look into this, studies such as time motion studies can be conducted. The services need to be well planned to accommodate the needs of the beneficiaries as well as the professionals. The fact that there is increase in the number of patients availing the casualty services increases every year is a matter to be considered seriously. Optimizing the health spending to improve the facilities of the emergency department needs consideration. Policies and planning taking into consideration the current situation and available facilities are to be undertaken.

Reference

1. Borgohain B, Khonglah T. Developing and Organizing a Trauma System and Mass Casualty Management: Some Useful Observations from the Israeli Trauma Model. Ann Med Health Sci Res. 2013;3(1):85–9.
2. Establishing a Mass Casualty Management System [Internet]. [cited 2019 May 29]. Available from: http://helid.digicollection.org/en/d/Jph24ee/
3. Joshipura MK, Shah HS, Patel PR, Divatia PA, Desai PM. Trauma care systems in India. Injury. 2003 Sep;34(9):686–92.
4. Subhan I, Jain A. Emergency care in India: the building blocks. Int J Emerg Med. 2010 Dec;3(4):207–11.
5. Abida Sultana, Rizwana Riaz, Sajid Hameed, Syed Arshad Sabir, Iffat Tehseen, Arshia, et al. Patient satisfaction in emergency department of District Head Quarters Hospital, Rawalpindi.
6. Zohrevandi B, Tajik H. A Survey of Patients' Satisfaction in Emergency Department of Rasht Poursina Hospital. Emergency. 2014;2(4):162–5.
7. Messina G, Vencia F, Mecheroni S, Dionisi S, Baragatti L, Nante N. Factors Affecting Patient Satisfaction With Emergency Department Care: An Italian Rural Hospital. Glob J Health Sci. 2015 Jul;7(4):30–9.
8. Sharma M, Brandler ES. Emergency medical services in India: the present and future. Prehospital Disaster Med. 2014 Jun;29(3):307–10.
9. Alagappan K, Cherukuri K, Narang V, Kwiatkowski T, Rajagopalan A. Early development of emergency medicine in Chennai (Madras), India. Ann Emerg Med. 1998 Nov;32(5):604–8.
10. Garg RH. Who killed Rambhor?: The state of emergency medical services in India. J Emerg Trauma Shock. 2012;5(1):49–54.

Work Related Stress Among Staff Nurses Workingin Intensive Care Units of Government MedicalCollege Hospital, Thiruvananthapuram

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Abstract

Stress is a physical or psychological stimulus that can produce mental tension or physiological reactions that may lead to illness. In the present study stress refers to the various difficulties the nurses have to face during their period of work. The purpose of the study was to assess the stress among staff nurses working in intensive care units of medical college hospital Thiruvananthapuram. The study was conducted among staff nurses working in intensive care units. Descriptive Survey approach was used for the study and structured questionnaire was used to collect information from participants. The study revealed that 97.1% nurses had moderate work-related stress and 2.9% had severe work-related stress and same proportion had moderate personal stress and mild personal stress respectively. Therewasno significant association found between socio demographic variables and stressamong nurses working in medical college hospital Thiruvananthapuram.

Keywords: Professional stress, staff nurse, interpersonal relationship

Introduction

Occupational stress is a recognized problem in health care workers.[1] Nursing has been identified as an occupation that has high levels of stress.[2] It was found that job stress brought about hazardous impacts not only on nurses' health but also in their abilities to cope with job demands. This seriously impairs the provision of quality care and the efficacy of health services delivery.[3,4] Nursing has been identified by a number of studies as a stressful occupation.[5,6] Stress has a cost for individuals in terms of health, wellbeing, and job satisfaction, as well as for the organization in terms of absenteeism and turnover, which in turn may impact the quality of patient care.[7,8]

Stress has been categorized as an antecedent or stimulus, as a consequence or response, and as an interaction. It has been studied from many different frameworks. For example, Selye[9] proposed a physiological assessment that supports considering the association between stress and illness. Conversely, Lazarus and Folkman[10] advocated a psychological view in which stress is "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her wellbeing."

Stress is not inherently deleterious, however. Each individual's cognitive appraisal, their perceptions, and interpretations, gives meaning to events and determines whether events are viewed as threatening or positive.[10] Personality traits also influence the stress equation because what may be overtaxing to one person may be exhilarating to another.[11]

In fact, occupational stress has been cited as a significant health problem.[12,13,14] Work stress in nursing was first assessed by Menzies[15] who identified four sources of anxiety among nurses: Patient care, decision making, taking responsibility, and change. The nurse's role has long been regarded as stress-filled based on the physical labor, human suffering, work hours, staffing, and interpersonal relationships that are central to the work nurses do. Since the mid-1980s, nurses' work stress has been escalating due to the increasing use of technology, continuing rises in health

care costs,[16] and turbulence within the work environment.[17]

Most people can cope with stress for short periods but Chronic stress produces prolonged changes in the physiological state.[18] The issues of job stress, coping, and burnout among nurses are of universal concern to all managers and administrators in the area of health care.[2] All these stresses can be modified in a positive way by the use of appropriate stress management skills.This study was conducted to identify the factors leading to stress among ICU staff nurses and to assess the level of stress among ICU staff nurses.

Methodology

The study was conducted in intensive care units of Medical College Hospital Trivandrum. All staff nurses working in intensive care units of Medical College Hospital Thiruvananthapuram with six month or more than six-month experience in the present ICU were consecutively selected for the study. A total of 100 staff nurses were interviewed using a structured questionnaire. Work related stress was assessed using the questions on poor work organization (the way we design jobs and work systems, and the way we manage them), poor work design, (lack of control over work process), poor management, unsatisfactory working conditions, and lack of support from others. Personal stress develops from situations that affect ones' relationship with oneself. A strong and positive sense of self is a powerful asset in coping with life stress. The questions on relationship difficulties/ divorce, caring for dependents such as children or elderly relatives, debt problem, moving house, illness in family were asked to elicit personal stress. Data was entered in Microsoft excel and data analysis was performed using SPSS ver.17.0. Quantitative variables were expressed as mean and standard deviation. Qualitative variables were expressed as proportion. Association between qualitative variables were analyzed by chi-square test. A p value of <0.05 was considered as statistical significance.

Results & Discussion

There were 104 participants in the study. The mean age of the study population was 31 ± 5.6 years (Table 1). Age ranged from 23-45 years. Majority (31.7%) of the participants were in the age group of 25-30 years. Nearly 71% of the participants were married and the rest (28.8%) were unmarried. Maximum number of participants were GNM 65(62.5%), followed by B.Sc. Nursing 32(30.8%) and M.Sc. Nursing 7 (6.7%). Participants with monthly income of <20000 were 13.5%, 20001-30000 were 20.2% and 30001-40000 were 31.7%. Years of experience showed that 37.5% of the participants were having less than 5 years of experience, 40.4% have 5-10 years and 22.1% have more than 10 years of experience. More than 50 percent were having less than 2 years of experience in present ICU, 26.9 % had 2-4 years and 19.2 % had>4years of experience in present ICU. Nearly 43% of the participants had no children. For nearly 14% of the participants, the spouse was unemployed.

Table.1. Socio demographic profile of the participants (N=104)

	N (%)
Age in years	
<25	12 (11.5)
25-30	33 (31.7)
30-35	27 (26)
35-40	22 (21.2)
>40	10 (9.6)

Religion	
Hindu	67 (64.5)
Christian	30 (28.8)
Muslim	7 (6.7)
Marital status	
Unmarried	30 (28.8)
Married	74 (71.2)
Professional qualification	
GNM	65 (62.5)
BS c Nursing	32 (30.8)
MSc Nursing	7 (6.7)
Monthly Income	
<20000	14 (13.5)
20001-30000	21 (20.2)
30001-40000	34 (32.7)
40001-50000	33 (31.7)
>50000	2 (1.9)
Duration of experience	
<5	39 (37.5)
5-10	42 (40.4)
>10	23 (22.1)
Duration of experience in present ICU	
<2	56 (53.8)
2-4	28 (26.9)
>4	20(19.2)
No. of children	
Nil	45 (43.3)
One	29 (27.9)
Two	30 (28.8)
Employment status of spouse	
Employed	63 (85.1)
Unemployed	11 (14.9)

Table 2 shows the stress score of the participants. Average environmental stress score among the study population was 53.2±5.0 and it ranged from 43 to 72 and average work related stress score was 49.6± 5.3. Less than 33.3% of the total stress score was considered as mild stress, 33.3-66. 7% was moderate stress and >66.7% considered as severe stress in each section (Table 3). 97.1% of the participants have moderate work related stress and 2.9% have severe work related stress. 2.9% of the study population has mild personal stress and 97.1 % have moderate level stress

Table 2 Work related and personal stress score

	N	Minimum	Maximum	Mean	S d
Work related stress score	104	43	72	53.2	5.0
Personal related stress score	104	38	62	49.6	5.3

Table 3: Work related stress and personal stress categorization

	N (%)
Work related Stress	
Moderate	101 (97.1)
Severe	3 (2.9)
Personal Stress	
Mild	3 (2.9)
Moderate	101 (97.1)

There was no significant association between working related stress and any of the socio demographic variables. Similarly, no statistically significant association was observed between personal stress and socio demographic variables.

Discussion

Our study revealed that the staff nurses are experiencing moderate to severe amount of work related stress. Stress up to a certain extent, will improve peoples' performance and quality of life because it is healthy and essential that they should experience challenges within their lives,[19] but if pressure becomes excessive, it loses its beneficial effect and become harmful,[20] because it is the reaction of people under pressure or other types of demands placed on them and arise when they worry that they cannot cope.[21]

It is important that stress is a state, not an illness, which may be experienced as a result of an exposure to wide range of work demands and in turn can contribute to an equally wide range of outcomes,[22] which may concern the employees' health and be an illness or an injury or changes in his/her behavior and lifestyle. Work life, however, is not independent from family life; these domains may even be in conflict [23,24]. Similar studies conducted elsewhere reports that professional stress was not significantly associated with socio-demographic factors like age, marital status, no of children and gender of the staff nurse [25].

Other factors although not studied as part of this study has significant impact on the Several studies have highlighted work overloads and time pressure as significant contributors to work stress among health care professionals[26,27] An excessive workload increases job tension and decreases job satisfaction, which in turn, increases the likelihood of turnover.[28,29] A study by Ali Mohammad Mosadeghrad among Iranian nurses revealed excessive workload and time pressure as one of the major factors leading to stress in terms of mean scores of occupational stress among them.[30]

Conclusion

Pressure at the workplace is unavoidable due to the demands of the contemporary work environment.Stress perceived as acceptable by an individual, may even keep workers alert, motivated, able to work and learn, depending on the available resources and personal characteristics. However, when that pressure becomes excessive or otherwise unmanageable it leads to stress.

Employees are less likely to experience work-related stress when demands and pressures of work are matched their knowledge and abilities

–control can be exercised over their work and the way they do it –support is received from supervisors and colleagues-participation in decisions that concern their jobs is provided.

The results show that there is an arising need to intervene with the stress of the staff nurses. Their experiences of personal as well as work related stress should be reduced using appropriate strategies. Help from a multidisciplinary team can be sought in this case.

References

1. Burbeck R, Coomber S, Robinson SM, Todd C. Occupational stress in consultants in accident and emergency medicine: A national survey of levels of stress at work. Emerg Med J. 2002;19:234–8.

2. Xianyu Y, Lambert VA. Investigation of the relationships among workplace stressors, ways of coping, and the mental health of Chinese head nurses. Nurs Health Sci. 2006;8:147–55.

3. Lee JK. Job stress, coping and health perceptions of Hong Kong primary care nurses. Int J NursPract. 2003;9:86–91. 4. Farrington A. Stress and nursing. Br J Nurs. 1995;4:574–8.

4. Marshall J. Stress amongst nurses. In: Cooper CL, Marshall, editors. White Collar and Professional Stress. London, Chicester: Wiley; 1980. 6. Bailey RD. Coping with stress in caring. Oxford: Blackwell; 1985.

5. Price JL, Mueller CW. Professional turnover: The case for nurses. New York: New Medical and Scientific Books; 1981.

6. Cronin-Stubbs D, Brophy EB. Burnout: Can social support save the psychiatric nurses? J PsychosocNurs Mental Health Serv. 1985;23:8–13.

7. Selye H. The stress of life. New York: McGraw Hill; 1956.

8. Lazarus RS, Folkman S. Stress appraisal and coping. New York: Springer; 1984.

9. French JR, Caplan RD. Organizational stress and individual strain. In: Marrow AJ, editor. The failure of success. New York: AMACOM; 1972. pp. 30–66.

10. Caplan RD, Cobb S, French JR, John RP, Harrison RV, Pinneau SR., Jr . Job demands and worker health: Main effects and occupational differences. Ann Arbor, MI: Institute for Social Research; 1980.

11. House JS. Work stress and social support. Reading, MA: Addison-Wesley; 1981.

12. Pelletier KR. Healthy people in unhealthy places. New York: Delacorte Press; 1984.

13. Menzies IE. Nurses under stress. InternatlNurs Rev. 1960;7:9–16.

14. Jennings BM. Stressors of critical care nursing. In:

Thelan LA, Davie JK, Urden LD, editors. Critical care nursing Diagnosis and management. St Louis, MO: Mosby; 1994. pp. 75–84.

15. Jennings BM. Turbulence. In: Hughes R, editor. Advances in patient safety and quality: An evidence-based handbook for nurses. Rockville, MD: AHRQ; 2007. pp. 2-193–2.202.

16. Chang EC, Tugade MM, Asakawa K. Stress and coping among Asian Americans: Lazarus and Folkman's model and beyond. In: Wong PT, Wong LC, editors. Handbook of multicultural perspectives on stress and coping. Dordrecht: Kluwer Academic Publishers; 2006.

17. Tehrani N, Ayling L. Work-related stress. CIPD Stress at work. 2009. Jun, [Lat accessed on 2008 Jan 12]. Available from: http://www.cipd.co.uk/subjects/health/stress/stress.htm .

18. Cooper CL, Cooper RD, Eaker LH. Living with stress. Harmonsworth: Penguin; 1988.

19. Tackling work related stress: A managers' guide to improving and maintaining employee health and well-being. Sudbury: HSE Books; 2001. Health and safety executive.

20. Doherty N, Tyson S. Mental well-being in the workplace: A resource park for management, training and development. Sudbury: HSE Books; 1998.

21. Near JP, Rice RW, Hunt RG. The relationship between work and nonwork domains: A review of empirical research. Acad Manage Rev. 1980;5:415–29.

22. Pearlin LI. Kaplan HB. Psychological stress Trends in theory and research. New York: Academic Press; 1983. Role strains and personal stress; pp. 3–32.

23. Sharma, P., Davey, A., Davey, S., Shukla, A., Shrivastava, K., & Bansal, R. (2014). Occupational stress among staff nurses: Controlling the risk to health. Indian journal of occupational and environmental medicine, 18(2), 52–56.

24. Van der Ploeg E, Kleber RJ. Acute and chronic job stressors among ambulance personnel: Predictors of health symptoms. Occup Environ Med. 2003;60(Suppl 1):i40–6.

25. Al-Aameri AS. Source of job stress for nurses in public hospitals. Saudi Med J. 2003;24:1183–7.

26. Aiken LH, Clarke SP, Sloane DM, Sochalski J, Silber JH. Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. JAMA. 2002;288:1987–93.

27. Strachota E, Normandin P, O'Brien N, Clary M, Krukow B. Reasons registered nurses leave or change employment status. J Nurs Adm. 2003;33:111–7

28. Mosadeghrad AM. Occupational Stress and Turnover Intention: Implications for Nursing Management. Int J Health Policy Manag. 2013;1:169–76

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Restrict tables and figures to those needed to explain the argument of the paper and to assess supporting data. Use graphs as an alternative to tables with many entries; do not duplicate data in graphs and tables. They are to be sequentially numbered with self-explanatory captions. Results are to be presented in logical sequence in the text, tables and illustrations.

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Emphasize the new and important aspects of the study and the conclusions that follow from them. Do not repeat in detail data or other information given in the Introduction or the Results section. For experimental studies, it is useful to begin the discussion by summarizing briefly the main findings, then explore possible mechanisms or explanations for these findings, compare and contrast the results with other relevant studies. Link the findings with the goals.

Conclusion and policy implications

State the limitations of the study, and explore the implications of the findings for future research and the policy implications.

References

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Greenough A. Pleural effusions. In: Greenough A and Milner AD, editors. Neonatal respiratory disorders, 2nd ed. London: Arnold Publication, 2003. p.355-64.

Institute for Clinical Systems Improvement. Health care guideline: preventive services- children and adolescents. Bloomington, 2002. Available from: www.ICSI.org. [Last accessed on 2015 Jan 31].

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