

Psychological Changes in Doctors Working in Pediatrics, Gynaecology, Medicine and Surgery during Corona Pandemic (Covid-19)

SHAHID MAHMOOD¹, ABID NAZIR CHOUDHARY², MUMTAZ ALI BHARO³, UBEDULLAH BAHALKAN⁴, TASLEEM BANO⁵, ASMA TARIQ⁶, UMBER RAUF⁷

^{1,3,5}Assistant Professor Pediatrics. Aziz Bhatti Shaheed Teaching Hospital, Gujrat.

²Associate Professor of Surgery. Aziz Bhatti Shaheed Teaching Hospital, Gujrat.

⁴Assistant Professor Pediatrics. Khair Pur Medical College Khairpur Mir

⁶Gynaecologist & Obstetrician. Aziz Bhatti Shaheed Teaching Hospital, Gujrat.

⁷APVO, Veterinary Research Institute, Zrar Shaheed Road, Lahore Cantt

Correspondence to Dr. shahid Mahmood, Email: shahid233@hotmail.com, Cell: 03366741496

ABSTRACT

Aim: To detect the psychological changes in doctors working in pediatrics, gynaecology, medicine and surgery during corona pandemic (COVID-19)

Study design; cross sectional study.

Place and Duration of Study: This study was conducted from January 2020 to April 2020 in Gujrat.

Methods: Total 240 doctors working in pediatrics, gynaecology, medicine or surgery were selected for study who had worked in the environment and area of the corona patients or area of suspected corona patients or in any outpatient area where an unknown but suspected corona patient can land. All doctors who left working during corona virus pandemic were excluded from the study. Doctors included in the study were asked specific questions to assess the changes in mental health and behavior due to corona virus infection (COVID-19) in the world. Later on accompanying individuals like family members or colleagues of that doctor were also inquired about the change in behavior of that doctor before and after the eruption of the corona virus infection.

Results: Total 240 doctors working in pediatrics, gynaecology, medicine or surgery were included from January 2020 to April 2020. Out of 240 doctors, 98(40.8%) were female doctors whereas 142(59.2%) were male doctors (TABLE I).

Many risk factors causing changes in mental health and behavior in doctors were detected including duty in hospital during corona crises, Social distance, Personnel protective equipment (PPE) use, fear of transmission of corona infection to their family members, both electronic & social media and discussion in community. One doctor might be affected by multiple risk factors as well. Many unwanted changes in mental health and behavior in doctors were observed including changes in sleep, changes in appetite, anger, difficulty in concentrating, fatigue and low energy, physical complaints like stomachaches etc not responding to normal treatment, feeling of hopelessness and increased sensitivity (TABLE III).

Conclusions: Many unwanted changes were noted in the mental health and behavior of the doctors working on front line for corona pandemic (COVID-19). These unwanted changes can be prevented by controlling the avoidable risk factors. Self safety is necessary at each and every level especially in danger zones. After taking proper safety measures, doctors can perform all types of duties for our beloved country Pakistan and humanity. Timely intervention, provision of necessary equipment, counseling and motivation of the doctors can prevent the unwanted changes in the mental health and behavior of doctors.

Keywords: Covid 19, pandemic, paediatric, gynaecology, medicine, surgery

INTRODUCTION

The rising incidence rate of psychiatric problems has drawn special attention of progressing world to mental health research¹³. Viral infection is very common now a day. The diagnosis of different viral infections has always been very difficult. The clinical presentation of viral infection is always non-specific¹².

Corona virus disease is highly transmissible and dangerous viral infection which may lead to respiratory problems¹⁴. Coronaviridae is the Family of coronaviruses and its order is Nidovirales. Corona virus has crown like spikes on it. Previously coronaviruses were considered to infect only animals until it caused severe acute respiratory syndrome (SARS) in China¹⁵. Aggression and irritability may be seen in depression due to any stimulus. Sometimes these changes may be one of the early features in young individuals¹.

Home environment and the environment of the surrounding always modify the mental status of human being especially in kids. Early intervention and proper counseling may help to decrease the negative impact of the environment^{2,3,4}. Cognitive behavioral therapy may be helpful in some cases in patients; it must be started early in illness⁵. Combination of medicine with cognitive behavioral therapy may give promising results in patients⁶. Moreover, using group formats and behavioral activation strategies also proved to be beneficial in young patients^{7,8}.

Early intervention especially to control the change in behavior during difficult time in high risk human has proven to be successful^{9,10}.

A well designed prevention program formatted to control emotions in difficult and fearful situations has proven itself a beneficial tool for providing normal life¹¹.

This study may help to eliminate the modifiable risk factors which can affect on mental health and behavior of the children and may bring the positive outcome after the stimulus is over.

MATERIALS AND METHODS

Total 240 doctors working in pediatrics, gynaecology, medicine or surgery were selected for study who had worked in the environment and area of the corona patients or area of suspected corona patients or in any outpatient area where an unknown but suspected corona patient can land. All doctors who left working during corona virus pandemic were excluded from the study. Doctors included in the study were asked specific questions to assess the changes in mental health and behavior due to corona virus infection (COVID-19) in the world. Later on accompanying individuals like family members or colleagues of that doctor were also inquired about the change in behavior of that doctor before and after the eruption of the corona virus infection in the world.

Descriptive statistics like mean or proportion or percentage was calculated for gender and risk factors. Risk factors of change in mental health and behavior were analyzed. Changes which

Received on 18-04-2020

Accepted on 30-06-2020

occurred in mental health and behavior due to corona infection pandemic were also analyzed.

RESULTS

Total 240 doctors working in pediatrics, gynaecology medicine or surgery, were included from January 2020 to April 2020. Out of 240 doctors, 98(40.8%) were female doctors whereas 142(59.2%) were male doctors (Table I).

Many risk factors causing changes in mental health and behavior in doctors were detected including duty in hospital during corona crises, social distance, personnel protective equipment (PPE) use, fear of transmission of corona infection to their family members, both electronic & social media and discussion in community. One doctor might be affected by multiple risk factors as well. Personnel protective equipment (PPE) deficiency and its demand played pivotal role and affected 237(98.7%) doctors, 139(97.9%) male doctors and 98(100%) female doctors. Duty in hospital during corona crises affected 219(91.3%) doctors, 126(88.7%) male doctors and 93(94.9%) female doctors. Total 180(75%) doctors were disturbed by fear of transmission of corona infection to their family members, 94(66.2%) were male doctors and 86(87.7%) were female doctors. Keeping necessary social distance affected 80(33.3%) doctors, 34(23.9%) male doctors and 46(46.9%) female doctors. Discussion in community affected only 02(0.008%) doctors, all two (2.04%) were female doctors and no male doctor was affected. It may be due to the reason that the doctors remained very busy and they had no time to discuss in community. Moreover community individuals used to ask from doctors about the situation because doctors were the source of information for community (Table I).

Table I: Gender distribution (n=240)

Male(n=142)	Female(n=98)	Total
142(59.2%)	98(40.8)	240(100%)

Table II: Risk factors causing changes in mental health and behavior (n=240)

Risk factors	No. Of male doctors(n=142)	No. Of female doctors(n=98)	Total(n=240)
Duty in hospital during corona crises	126(88.7%)	93(94.9%)	219(91.3%)
Social distance	34(23.9%)	46(46.9%)	80(33.3%)
Personnel protective equipment (PPE)use	139(97.9%)	98(100%)	237(98.7%)
Fear of transmission of corona infection to their family members	94 (66.2%)	86(87.7%)	180(75.0%)
Both electronic and social media	36(25.4%)	35(35.7%)	71(29.5%)
Discussion in Community	00(0%)	02(2.04%)	02(0.008%)

Table III: Unwanted changes in mental health and behavior in doctors (n=240)

Unwanted changes	No. Of male doctors(n=142)	No. Of female doctors(n=98)	Total(n=240)
Changes in sleep	21(14.7%)	62(63.2%)	83(34.5%)
Changes in appetite	16(11.2%)	78(79.5%)	94(39.1%)
Anger	02(1.4%)	06(6.1%)	08(3.3%)
Difficulty in concentrating	02(1.4%)	03(3.1%)	05(2.08%)
Fatigue and low energy	43(30.2%)	72(73.4%)	115(47.9%)
Physical complaints like stomachaches etc not responding to normal treatment	02(1.4%)	05(5.1%)	07(2.9%)
Feeling of hopelessness	01(0.7%)	02(2.04%)	03(1.2%)
Increased sensitivity	06(4.2%)	17(17.3%)	23(9.5%)
Thoughts of death	00(0%)	00(0%)	00(0%)

DISCUSSION

In this study we have seen about the unwanted changes on mental health and behavior of doctors of Gujrat during corona pandemic (COVID-19), which may be seen due to sudden change in the surrounding environment. It has also been observed that concept of a doctor may be changed due to any foreign stimulus and stress. Unwanted awful, fearful and frightening news through any source may affect the mental status and behavior of the doctor.

Fear of transmission of corona infection to their family members was taken very serious by female doctors and it affected 86(87.7%) female doctors, on other hand only 94(66.2%) male doctors gave importance to fear of transmission of corona infection to their family members (Table II) .

Many unwanted changes in mental health and behavior in doctors were observed including changes in sleep, changes in appetite, anger, difficulty in concentrating, fatigue and low energy, physical complaints like stomachaches etc not responding to normal treatment, feeling of hopelessness, increased sensitivity & irritability and thoughts of death. One doctor might show more than one unwanted changes in mental health and behavior. Increased sensitivity was seen in 23 (9.5%) doctors, 06(4.2%) male doctors and 17(17.3%) female doctors. Fatigue and low energy was observed 115(47.9%) doctors, 43(30.2%) male doctors and 72(73.4%) female doctors. Total 94(39.1%) doctors told about changes in appetite, 16(11.2%) were male doctors and 78(79.5%) were female doctors. Total 83(52.5%) doctors did complaint about changes in sleep, 18(34.5%) were male doctors and 62(63.2%) were female doctors. Difficulty in concentration was seen in 05 (2.08%) doctors, 02(1.4%) male doctors and 03(3.1%) female doctors. Physical complaints like stomachaches etc not responding to normal treatment was seen in 07 (2.9%) doctors, 02(1.4%) male doctors and 05(5.1%) female doctors. Feeling of hopelessness was seen in 03 (1.2%) doctors, 01(0.7%) male doctors and 02(2.04%) female doctors. Anger was seen in 08 (3.3%) doctors, 02(1.4%) male doctors and 06(6.1%) female doctors Thoughts of death were not observed in female as well as male doctors (Table III).

If we generally have a look, many family members of most of the families in Gujrat are in different countries of the world for earning purpose. Gujrat is a city of Punjab province of Pakistan which is surrounded by two rivers. Gujrat is situated on grand trunk road in the centre of the way of Islamabad and Lahore. When corona pandemic started from one area and attacked the world, meanwhile a large number of people returned to their home town Gujrat from different countries of the world due to uncertain condition all over the world. That's why there was a sudden rise in confirmed corona patients in Gujrat.

Carlson and colleagues in 1980 explained that though aggression and irritability may be seen in young people due to many underlying reasons but it may also be the main feature in depression in children¹.

In our study, excessive sensitivity, irritability and anger was observed in doctors working in COVID-19 areas during corona pandemic (Table III).

Weisz and friends in 2006 and Brent along with colleagues in 2006 told that Cognitive behavioral therapy alone or Cognitive behavioral therapy in combination with medicine respectively may give satisfactory results in treatment of the behavior problems^{5,6}.

In our study, courage, counseling and motivation were provided immediately to overcome the behavior problems. Webster-Stratton and colleagues in 2004 and Hood and friends in 2003 told that early intervention in behavior problems is necessary to achieve acceptable results^{9,10}.

In our study, we emphasized that to overcome the problems, all the doctors must be motivated. Possible and necessary equipments must be provided by administration.

Izard along with friends in 2008 discussed that preventive programs may help to save the person from emotional problems¹¹. In our study, we have discussed many risk factors causing the unwanted changes. These unwanted changes can be prevented by controlling the avoidable risk factors (Table II).

CONCLUSIONS

Many unwanted changes were noted in the mental health and behavior of the doctors working on front line for corona pandemic (COVID-19). These unwanted changes can be prevented by controlling the avoidable risk factors. Self safety is necessary at each and every level especially in danger zones. After taking proper safety measures, doctors can perform all types of duties for our beloved country Pakistan and humanity. Timely intervention, provision of necessary equipment, counseling and motivation of the doctors can prevent the unwanted changes in the mental health and behavior of doctors.

REFERENCES

1. Carlson GA, Cantwell DP. Unmasking masked depression in children and adolescents. *Am J Psychiatry* 1980; 137: 445-9.
2. Alderman H, Behrman JR, Lavy V, Menon R. Child health and school enrollment: A longitudinal analysis. *Ann. Journal of Human resources* 2001; 1: 185-205.
3. Glewwe P, Jacoby HG, King EM. Early childhood nutrition and academic achievement: a longitudinal analysis. *Journal of public economics* 2001; 81 (3): 345-68.
4. Victora CG, Adair L, Fall C, Hallal PC, Martorell R, Richter L et al. Maternal and child under nutrition: consequences of adult health and human capital. *The Lancet* 2008; 371 (9609): 340-57.
5. Weisz J, McCarty C, Valeri S. Effects of psychotherapy for depression in children and adolescents: a meta-analysis. *Psychol Bull* 2006; 132: 132-49.
6. Brent DA, Glad for TADS adds, but many TADS grads still sad. *J Am Acad Child Adolesc Psychiatry* 2006; 45: 1461-4.
7. Stark KD, Hargrave J, Sander J, Custer G, Simpson J, Molnar J. Treatment of childhood depression: The action treatment Programme. In: Kendall PC, editor. *Child and Adolescent therapy: Cognitive behavioral procedure*. 3rd ed. New York: Guilford; 2006. pp. 169-216.
8. Richardson L, McCauley E, Katon W. Collaborative care for adolescent depression: a pilot study. *Gen Hosp Psychiatry* 2009; 31: 36-45.
9. Webster-Stratton C, Reid MJ, Hammond M. Teaching children with early onset conduct problem: intervention outcomes for parents, child and teacher training. *J Clin Child Adolesc Psychol* 2004; 33: 105-24.
10. Hood K, Eyberg S. Outcome of parent child interaction therapy: mothers, reports of maintenance three to six years after treatment. *J Clin Child Adolesc Psychol* 2003; 32: 419-29.
11. Izard CE, King KA, Trentacosta CJ, Morgan JK, Laurenceau JP, Krauthamer-Ewing ES, et al. Accelerating the development of emotion in Head start children: effects on adaptive and maladaptive behavior. *Dev Psychopathol* 2008; 20: 369-97.
12. Peeling WR, Olliaro P. Reimagining the future of the diagnosis of viral infection. *The Journal of Infectious Diseases* 2016; 214 (6): 828-9.
13. Rolim-Neto ML, Silva TN, Assuncao JKM. Childhood depression and psychocognitive development : prdiscription of causality relationship. *Rev Bras Cresc Desenvolv Hum* 2011; 12 (3): 894-98.
14. Shereen MA, Khan S, Kazmi A, Bashir N, Siddique R. Covid 19 infection: Origin, transmission and characteristics of human coronaviruses. *Journal of Advanced Research* 2020; 24: 91-8.
15. Zhong N, Zhong B, Li Y, Poon L, Xie Z, Chan K, et al. Epidemiology and cause of severe acute respiratory syndrome (SARS) in Guangdong, People,s Republic of China, in February 3003. *The Lancet* 2003; 362 (9393): 1353-8.