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Post-COVID impact: Misery of the indispensed

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ABSTRACT

Background: COVID-19 seized human life with sickness & fatality; even elicited medical, social and financial unrest. Clinical symptoms continued for weeks after contracting COVID-19 with socio-emotional turmoil. Considering these adversities, it was decided to ascertain medico-social effect of COVID-19 on patients coming in contact with scholar during May 2020 to September 2021 in Kolkata.

Materials and Methods: 83 COVID-19 positives were contacted for enlisting & consent on first opportunity, however only 79 responded & continued. A structured questionnaire was prepared including personal attributes, details of COVID-19 infection and post-COVID medico-social problems. Questionnaires were distributed online as and when contact established during study. Participants were contacted for clinical conditions every week during first month, thereafter once a month till 3 months. Finally, data collected were analyzed and tabulated.

Results: 34 & 45 subjects had COVID-19 during 2020 & 2021 respectively. Majority were educated employed males of 41-50 years with co-morbidities (35.6-52.9%). All followed COVID appropriate behaviour. Fever, fatigue, breathlessness, sore-throat & cough were common during first week; even continued for some in following weeks. Headache, anosmia & ageusia, giddiness, weight-gain & insomnia were also persistent. Isolation, anxiety, avoidance by relatives, hardship in daily needs with apathy of attendants made lingering problems. 13-35% had financial hang-ups due to expenses & helplessness. Time with family, online counsellor support and upgraded home delivery services with containment-respite were in high demand.

Conclusion: Study revealed prolonged medico-social sufferings of the COVID affected seeking online medical-social-psychological support. Further research is contemplated to plan possible future guidelines to resolve these kinds of hardships in pandemic.

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1. Introduction

The catastrophic COVID-19 pandemic annihilated human life in an insurmountable manner in the recent past. The nefarious contagion denigrated human existence not only with disease & death but even triggered medical, social and economical disquiet among the afflicted. Patients continue to experience certain symptoms weeks and months after

onset of COVID-19 regardless of disease severity along with much social & emotional quandary.¹⁻³ Considering this disturbing tribulation, it was thought prudent to ascertain the detrimental effect of COVID-19 infection on medico-social front for the affected individuals those intersected with the scholar in personal and professional domain during May 20 to Sep 21 in Kolkata, India.

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2. Materials and Methods

The study was conducted by purposive selection of all COVID-19 affected individuals who came in contact with the incumbent through personal and professional threads of communication during the pandemic. 83 such individuals, who were declared COVID-19 positive by RT-PCR in Govt. & Private hospitals and clinics during May 20 to Sep 21, were contacted through e-mode for enlisting and online individual consent, however only 79 of them did respond. Sample size was considered on the basis of incidence of COVID-19 in Kolkata (2.26%) considering total cases in 2021 as documented 3.37 Lacs in a population of 14.9 Million approximating to a sample of 36 at 5% error.⁴ However, as 79 COVID affected subjects registered for the study, all were included. A structured self-admissible organised questionnaire was prepared after scrutinizing available literature and international scientific data on the issue which included the participants' personal attributes, details of COVID-19 infection and the post-COVID medico-social ordeal experienced by them. The e-questionnaires were distributed e-mode/online sequentially as the incumbent came in contact with the affected subjects during the study period. The participants were contacted to note their conditions every week during first month, thereafter once in 4 weeks till 12 weeks. The filled-in questionnaires received initially were topped-up with information received later during weekly/monthly follow up of each subject. Finally, questionnaires were scrutinized, analyzed and tabulated. Socio-economic status (SES) was ascertained as per current scale.⁵ Common statistical applications were used to determine significance as needed appropriate.

3. Results

There were 34 & 45 individuals who contracted COVID-19 in 2020 & 2021 respectively (Table 1). Majority of the subjects belonged to 41-50 years age group (47% & 44%) in both the groups followed by 31-40 years group (26.5% & 26.7%). Large percentage were Hindu (91%) male (60% & above) and educated to post-graduate level (around 67%) in both the clusters. 79% & 93% were employed as stated; significantly large no. of affected (23.5%) lost job during 2020. 85-88% of the employed were benefitted by jobs in Govt. sector being benched with full pay. 18 (52.9%) & 16 (35.6%) respondents had co-morbidities respectively, of which hypertension in the first group and coronary artery disease (CAD) in the second were predominant. A little above 35% in each group contracted COVID-19 in the month of May '20 & '21 and Jun '21 respectively. Significantly higher proportions (88%) were admitted in hospital in first wave as compared to the second (69%). Mostly the contacts of both sets of patients were quarantined at home and significantly higher proportions (47%) of the

first group had one or other addiction.

Cent-percent respondents of both the assemblages practiced washing hands twice daily before meals, wearing mask outdoor, social distancing, up-keeping personal hygiene, using sanitizer, observing cough/sneeze discipline and avoiding personal contact greetings. However, frequent hand washing (>3 times a day) & using gloves outdoor were not in that high order.

During the first wave, majority (100%) experienced fever, weakness, breathlessness and cough with sore throat during first 3 weeks, continued to experience the same (except fever) till 9 weeks (94-100%) and many of them (35-82%) remained symptomatic beyond 9 weeks following the initial acquisition of COVID-19 (Table 3). Headache (94%), anosmia & ageusia (64.7%), giddiness, weight-gain & sleeplessness (35% each) constituted other persisting symptoms that even continued in the proportion of 29 to 76% till 9 weeks later resolved to certain extent except for anosmia-ageusia, weight gain and insomnia. Diarrhoea, irritability, arthralgia (29% each) and mental clouding (23.5%) were among other important symptoms during first 3 weeks that persisted approximately in the same proportion till 8 weeks and faded away thereafter except for arthralgia & irritability continuing beyond 9 weeks.

During the second surge in 2021, majority (100%) experienced fever, weakness, breathlessness followed by cough with sore throat (93.3%) and headache (91%) during first 3 weeks, continued to experience the same except fever till 9 weeks (89-100%) and considerable proportion (40-89%) remained symptomatic beyond 9 weeks following COVID-19 infection. Anosmia & ageusia (60%), insomnia, diarrhoea & arthralgia (40% each) represented other lasting symptoms that even continued in the proportion of 13 to 48.8% till 9 weeks later got settled except for loss of smell/taste and insomnia. Mood swing, weight gain (33% each) with giddiness & mental clouding (20% each) were relevant in the first 3 week, continually experienced by 20% of the affected subjects till 9 weeks except for giddiness, further extended past 9 weeks in 13% patients.

During first wave, isolation, anxiety, avoidance by relatives, difficulties in procuring common items & medicines along with apathy from attendants/drivers became part of life for cent-percent affected subjects in the first 3 weeks after COVID infection that extended till 9 weeks for 76% & above respondents, further remained as reality for existence for 59-64.7% of the patients beyond 9 weeks (Table 4). Many (91%) felt lonely, disinterested in surroundings and lost-access to health care during first 3 weeks that stretched in 70.5% individuals during 4-9 weeks finally continuing among 29-59% of the subjects even beyond 9 weeks. 35% stated about financial constraints due to extra expenditure and feeling of helplessness till 9 weeks and 26.5% had the same ahead of 9 weeks also.

Table 1: Socio-demographic attributes of COVID-19 patients

Personal Attributes	Sub-attributes	Contracted in 2020 (n1-34)	Contracted in 2021 (n2-45)	Significance
Age (n-79)	20 - 30 years	3 (8.82)	5(11.11)	Chi-sq – 0.1296, NS
	31 - 40 years	9(26.47)	12(26.67)	
	41 - 50 years	16(47.05)	20(44.44)	
	51 years and above	6(17.65)	8(17.78)	
Gender (n-79)	Male	21(61.76)	27(60.0)	Chi-sq – 0.0253
	Female	13(38.24)	18(40.0)	
Religion (n-79)	Hindu	31(91.18)	41(91.11)	Chi-sq – 0.0001, NS
	Muslim	3(8.82)	3(6.67)	
	Others	-	1(2.22)	
Education (n-79)	Graduate	11(32.35)	15(33.33)	Chi-sq – 0.008, NS
	Post-graduate	23(67.65)	30(66.67)	
Working status (n-79)	Employed	26(76.45)	42(93.33)	Chi-sq – 4.59, p<0.05
	Lost job	8(23.53)	3(6.67)	
Working org (n-68) (n1-26, n2-42)	Govt. services	22(84.61)	36(85.71)	Chi-sq – 0.003, NS
	Private org	4(15.38)	6(14.29)	
SES (n-79)	Higher	29(85.30)	38(84.44)	Chi-sq – 0.01, NS
	Upper middle	5(14.70)	7(15.56)	
Co-morbidities (n-36) (n1-18, n2-16)	Hypertension	9(50.00)	4(25.00)	Chi-sq – 7.89, p<0.05
	Diabetes	7(38.89)	3(18.75)	
	CAD	1(5.56)	5(31.25)	
	Others	1(5.56)	4(25.00)	
Months of COVID Acquisition (n-79)	May	2(5.88)	16(35.56)	Chi-sq – 29.38, p<.0001
	Jun	3(8.82)	16(35.56)	
	July	8(23.52)	7(15.56)	
	Aug	9(26.47)	5(11.11)	
Admitted to Hospital (n-79)	Sep	12(35.29)	1(2.22)	Chi-sq – 4.12, p<0.05
		30(88.24)	31(68.89)	
Quarantine of contacts (n-87) (n1-37, n2-50)	Home	34(91.89)	48(96.0)	Chi-sq – 0.66, NS
	Center	3(8.11)	2(4.0)	
Addiction (n-79) (n1-34, n2- 45)	Tobacco	7(20.59)	5(11.11)	P1-47.1, P2-24.4, Z-2.12, p<0.05
	Alcohol	9(26.47)	6(13.33)	
	Others	-	-	

Table 2: Practice of COVID appropriate measures

COVID Appropriate Behaviour	Followed precautions	
	2020 (n-34) No. (%)	2021 (n-45) No. (%)
Washing hand with soap/water twice, at least before meals	34(100.0)	45(100.0)
Washing hand with soap & water 3 times or more everyday	20(58.82)	24(53.33)
Wearing mask while going out for daily need or work	34(100.0)	45(100.0)
Social distancing from others in shops, markets & public places	34(100.0)	45(100.0)
Wearing gloves in market places & shops	20(58.82)	24(53.33)
Taking daily bath & maintaining personal hygiene	34(100.0)	45(100.0)
Using alcohol based sanitizer to disinfect hand	34(100.0)	45(100.0)
Covering mouth & nose in case of cough & sneezes	34(100.0)	45(100.0)
Not shaking hand or hugging anyone	34(100.0)	45(100.0)

Table 3: Persistence of medical symptoms of COVID patients

Medical Problems	Contracted in 2020 (n-34)			Contracted in 2021 (n-45)		
	No. of patients had symptoms (%)			No. of patients had symptoms (%)		
	03 weeks	04-09 weeks	> 09 weeks	03 weeks	04-09 weeks	> 09 weeks
Moderate to high Fever	34 (100.00)	8 (23.52)	-	45 (100.00)	6(13.33)	-
Weakness/tiredness	34 (100.00)	34 (100.00)	28 (82.35)	45 (100.00)	45 (100.00)	40 (88.88)
Breathlessness	34 (100.00)	32 (94.11)	26 (76.47)	45 (100.00)	42 (93.33)	40 (88.88)
Cough/sore throat	34 (100.00)	32 (94.11)	12 (35.29)	42 (93.33)	42 (93.33)	36 (80.00)
Headache	32 (94.11)	26 (76.47)	-	41 (91.11)	40 (88.88)	18 (40.0)
Loss of smell & Taste	22 (64.70)	20 (58.82)	10 (29.41)	27 (60.0)	22 (48.88)	6 (13.33)
Giddiness	12 (35.29)	10 (29.41)	-	9 (20.0)	-	-
Weight gain	12 (35.29)	10 (29.41)	10 (29.41)	15 (33.33)	9 (20.00)	-
Sleep problem	12 (35.29)	10 (29.41)	9 (26.47)	18 (40.00)	9 (20.00)	9 (20.00)
Diarrhoea	10 (29.41)	9 (26.47)	-	18 (40.00)	6 (13.33)	-
Change in mood	10 (29.41)	10 (29.41)	10 (29.41)	15 (33.33)	9 (20.00)	6 (13.33)
Arthralgia/Myalgia	10 (29.41)	10 (29.41)	8 (23.52)	18 (40.00)	18 (40.00)	6 (13.33)
Mental clouding	8 (23.52)	8 (23.52)	-	9 (20.00)	9 (20.00)	6 (13.33)

Table 4: Social set-backs experienced by COVID patients

Social Problems	Contracted in 2020 (n-34)			Contracted in 2021 (n-45)		
	No.(%) expressed difficulties			No.(%) expressed difficulties		
	03 weeks	04-09 weeks	>09 weeks	03 week	04-09 weeks	>09 weeks
Isolation	34 (100.0)	26 (76.47)	22 (64.70)	45 (100.0)	42 (93.33)	36 (80%)
Anxiety for persistent symptoms	34 (100.0)	26 (76.47)	22 (64.70)	45 (100.0)	42 (93.33)	36 (80%)
Avoidance by relatives & Friends	34 (100.0)	26 (76.47)	22 (64.70)	45 (100.0)	42 (93.33)	36 (80%)
Difficulty in procuring common medicines	34 (100.0)	26 (76.47)	22 (64.70)	45 (100.0)	42 (93.33)	36 (80%)
Avoidance by attendants, drivers & domestic help	34 (100.0)	26 (76.47)	20 (58.82)	42 (93.33)	40 (88.88)	27 (60.0)
Difficulty in going out for provisions	34 (100.0)	28 (82.35)	20 (58.82)	42 (93.33)	40 (88.88)	27 (60.0)
Loneliness	31(91.17)	24 (70.59)	20 (58.82)	42 (93.33)	40 (88.88)	27 (60.0)
Loss of interest in Surrounding	31(91.17)	24 (70.59)	20 (58.82)	40 (88.88)	36 (80%)	27 (60.0)
Loss of access to health care	31(91.17)	24 (70.59)	10 (29.41)	40 (88.88)	36 (80%)	22 (48.88)
Financial constraint	12 (35.29)	12 (35.29)	9 (26.47)	9 (20.0)	9 (20.0)	6 (13.33)
Helplessness	12 (35.29)	12 (35.29)	9 (26.47)	9 (20.0)	9 (20.0)	-

During second surge, cent-percent stated social barriers of isolation, anxiety, avoidance by relatives and trouble in obtaining medicines in the first 3 weeks after COVID acquisition that persisted till 9 weeks for 93% of the afflicted, remained further among 80% of the patients beyond 9 weeks. 93% exclaimed of loneliness, avoidance by attendants/driver and difficulty in getting daily provisions during first 3 weeks even suffering through the same hurdle in high proportion (89%) till 9 weeks, scaled down to

60% past 9 weeks after COVID infection. 89% revealed loss of interest in surrounding and difficulty in accessing medical care during first 3 weeks truncated to 80% & 49% sequentially later till 9 weeks and beyond. 20% reiterated about financial constraints and helplessness all through 9 weeks after initial infection.

All respondents during both the phases of pandemic disclosed the wish of spending more time with family, abatement of anxiety, requirement of a counselor and

Table 5: Perceived need for social support

Perceived support/need for social problems	Contracted in 2020 (n-34) No. (%)	Contracted in 2021 (n-45) No. (%)
More time needed with working spouse at home	34(100.0)	45(100.0)
Someone who could absolve anxiety	34(100.0)	45(100.0)
Requirement of a counselor/professional	34(100.0)	45(100.0)
Online counselling support	32(94.11)	45(100.0)
Streamlining of domestic support	34(100.0)	42(93.33)
Reformation of home delivery & procurement	34(100.0)	45(100.0)
Relaxation in containment rule & dispel stigma	31(91.17)	40(88.88)

restructuring of home delivery system. Large contingent during the first wave insisted online counseling assistance (94%) and cutback in containment rules (91%) to dispel stigma as against 89 to 93% of second surge, demanding domestic support for elderly and curtailment of containment rules.

4. Discussion

The study included patients from both first and second surge of COVID-19 pandemic in Kolkata, India during 2020 & 2021. Affected individuals belonged to different age groups, educational and economic status. Majority belonged to 41-50 years age group (47% & 44% respectively) followed by 31-40 years group (above 26% each) in both the phases of pandemic. Preponderantly educated employed males (60% & above) were affected indicating their possible vulnerability to exposure to infectious environment. A recent study documented consistent predominance of males (65.39%) compared to females (34.61%) among COVID-19 patients in all age categories.⁶ The researchers consider higher rates of smoking, lesser hand washing, existing respiratory illness and biological difference between sexes as driving force for higher infection rate among males.⁷ Preventive measures to avoid COVID-19 were found significantly associated with the gender where females noticed to have been more strict followers compared to males.⁸

Co-morbidities existed in 52.9% & 35.6% respondents respectively of the corresponding phases, of which hypertension in the first group and CAD in the second found the leading. Recent studies documented that 20–51% of patients of COVID-19 reportedly having one or more comorbidity with diabetes (10–20%), hypertension (10–15%), cardio and cerebro-vascular diseases (7–40%) being the common.^{9,10}

A little above 35% in each phase got COVID-19 infection in the month of Sep'20 & May and Jun '21 respectively. Reportedly crests of epidemicity were reached in these months in India during the year'20 & '21 respectively.¹¹

Seasonal variations has been well-established criteria for many respiratory viral infections including COVID-19 indicating association between temperature, humidity, UV radiations and contagion presence; however other analyses have failed to show a credible role of climate and weather particularly when population immunity is low.^{12,13} Governmental non-pharmaceutical interventions (NPIs) like lock-down, closure of Govt. offices, educational institutions, malls & movie halls resulted in waxing and waning of infection rate in consecutive waves since early 2020, effect of which could be crucial than environmental determinants.¹⁴ Significantly 88% of the subjects were admitted in hospital during first wave as compared to the second (69%) however, there were no fatalities. During the second wave in India, the proportion of active cases that needed hospital care remained generally in the range of 20-23 percent.¹⁵ Most contacts of both groups were quarantined at home and significantly 47% patients of the first phase had one or other addictions. Socio-demographic traits and the dynamics of the disease transmission among the subjects in the present endeavour showed commonality in most of the facets with recently published works probably asserting convincing internal validity of the sample.

Entire respondents of both the lots practiced washing hands twice daily before meals, wearing mask outdoor, social distancing, maintaining personal hygiene, using sanitizer, observing cough/sneeze discipline and avoiding contact greetings. However, frequent hand washing (>3 times a day) and use of gloves outdoor were not followed in that high order in the groups.

Authors ascribed around 95-98% of the educated subjects displayed correct preventive knowledge to avert COVID-19 following personal protective measures (PPM).¹⁶ It has been annotated that large no. of subjects followed PPM adequately by using masks (97.2%), social distancing (95.3%) and hand hygiene (91.2%) that apparently corroborates the observations of present work.¹⁵ Strong governmental initiatives coupled with synergistic effects of awareness, acceptance and action by the people made it possible to execute COVID appropriate behaviour

(CAB) satisfactorily to counter the spikes of COVID-19 infection.¹⁷

During the first wave, everyone had fever, fatigue, breathlessness, cough & sore throat during first 3 weeks, continued (except fever) till 9 weeks (94-100%) and many (35-82%) remained symptomatic beyond 9 weeks following the infection. Headache (94%), anosmia & ageusia (64.7%), giddiness, weight-gain & sleeplessness (35% each) were persistent & lingered in high order (29-76%) till 9 weeks; further stuck around except for headache. Diarrhoea, irritability, arthralgia (29% each) and mental clouding (23.5%) were significant during first 3 weeks, persisted in similar order till 8 weeks and faded away subsequently except for arthralgia & irritability continuing beyond 9 weeks. Similar sort of manifestations were experienced for fairly same duration even in the second surge.

Reportedly at 4 months after initial infection, shortness of breath (8.6%), anosmia (12.4%), ageusia (11.1%), and fatigue (9.7%) persisted among the COVID-19 patients; generally one characteristic symptom was present in 27.8 & 34.8% at 4 and 7 months post-infection respectively.¹⁸ Anosmia and diarrhoea during acute COVID-19 were associated with higher risk of developing long-term symptoms. In line with data published by Townsend et al, it was seen that even patients with initially mild disease may develop fatigue as a leading and debilitating feature making individual non-participating in everyday & work-life.¹⁹

Moreno-Perez et al reported that up to 50.9% of the patients considered “recovered” even with persisted symptoms similar to those experienced during the acute phase.²⁰ Moreover, other studies showed that the reported duration of myalgia-arthralgia varies widely depending on duration of patients’ follow-up.^{21–23}

Isolation, anxiety, avoidance by relatives, hardships in procuring daily needs & medicines along with indifference from attendants/drivers were of high order (93-100%) among the indisposed of both phases of pandemic during first 3 weeks existing in the range of 59-80% even beyond 9 weeks after COVID acquisition. Loneliness, loss of interest in the daily errands and lost-access to health care during first 3 weeks were considerably high (89-91%) further extending in the range of 29-60% past 9 weeks among the affected of both the upsurges. Financial constraints due to added expenses and helplessness were experienced in the ambit of 13-35% among the patients of both stages of catastrophe over entire period.

Studies reported that patients with COVID-19 had symptoms of anxiety (42%), depression (31%) and insomnia (40%).^{24,25} Recent work disclosed that post-traumatic stress associated with the COVID-19 was 96.2% among COVID-19 patients and half of the participants considered psycho-educational services helpful.²⁶ Zhang et al documented that depression (29.2%) was quite predominant in COVID-19 patients associated with anxiety-

driven behavior like easy annoyance & irritability.²⁷ Findings of the present intent on social setbacks is higher than the documented observations and that appears to be due to the fact that all these factors have been self-stated subjective reflection of affected psyche with immediate recollection resulting in higher cogitation; therefore needs guarded consideration while comparing with findings of other studies.

The study revealed that more time with family, alleviation of anxiety through counselor and revamping of home delivery services were of high demand (100%) together with online support and relaxation in containment rules (>89%) among the affected of both phases. The preventive measures of isolation, quarantine and containment related restricted mobility for the patients & their contacts, adopted in managing the pandemic showed unwanted consequences like anxiety, depressive episodes and post-traumatic stress among the sensitive subjects; when prolonged, did aggravate negative emotions and psychological breakdown.²⁸ Promotion of psychological interventions on the specific population who is more likely to develop negative emotions and suffering is needed. The Lancet Global Mental Health Commission reported that the use of digital technologies can provide mental health interventions in order to reduce anxiety & stress and increase self-efficacy.^{29,30} It has been proclaimed that online counseling bypasses geographical barriers and is suitable to become a useful integrated tool in addition to traditional psychotherapy.³¹ Solidarity & compassion including food & medicine supply for isolated afflicted by generating a feeling of ‘forced empathy’ need to be accentuated by the use of hi-tech gadgets & means that may assist in depersonalization of associations & relationships, forcing the sense of closeness & familiarity, at least virtually. The hyper-connection of feelings & emotional bonding becomes a way to dissipate isolation and its consequences.

5. Conclusion and Limitation

This has been a controlled work carried out among the linked patients of the incumbent scholar, who were generally contacted through telecom & e-modes during strict surveillance with restricted mobility phase of the pandemic in Kolkata. Therefore it needs careful consideration for generalization and comparison with other literature. However, the socio-demographic traits of the affected including disease transmissibility patterns were similar to recently documented literatures, possibly pointing to a plausible coherent sample. The study unveiled prolonged sufferings of the COVID-19 affected in medical-social-diurnal front especially among the elders and directs activation of online services for medical, social, psychological & humanitarian support & assistance. Further research in comparable directions may lend a hand to decide prospective line of approach to resolve the tribulations of

epidemic-affected people in future comprehensively.

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None.


7. Conflict of Interest

None.

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