International Journal of Research and Review
Vol. 9; Issue: 9; September 2022
Website: www.ijrrjournal.com
Original Research Article *E-ISSN: 2349-9788; P-ISSN: 2454-2237*

Physician Burnout at Georgetown Public Hospital (GPHC): The Hidden Health Worker Crisis

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DOI: https://doi.org/10.52403/ijrr.20220920

ABSTRACT

Objective: This article reviews the prevalence and influencing factors of physician burnout.
Design & Methods: A cross-sectional study was conducted using a hard copy of the Maslach Burnout Inventory (MBI) during April, 2021 at Georgetown Public Hospital Corporation. Participants included 250 physicians from 18 departments. Questionnaires were contested voluntarily and anonymously. The MBI items were rated on a Likert scale from 0 to 6. It access: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA), each dimension is classified into severe, moderate or low burnout. Data was analyzed using Microsoft Excel 2016 and SPSS statistics.
Results: The prevalence of burnout for each dimension was: 79.8% (n=138) for EE, 67% (n=116) for DP and 69.9% (n=121) for PA with an average score of 30 (0-52); 10.3 (0-57) and 34.9 (59-1) respectively. Contributing factors to burnout were: physicians working shift, female gender, single status and ages of 30-39.
Conclusions: The prevalence of burnout at GPHC was high. Contributing factors were working a shift system, attending to >20 patients daily, working >65 hours weekly and not partaking in recreational activities.
Recommendation: Implementing measures to combat burnout is paramount to maintain physician's health. Provision of areas for recreational activities, a food court with healthy food options, providing psychologists/ counsellors for physicians in each department and wellness activities can be beneficial in the future.

Keywords: Burnout; Maslach burnout inventory; Physician burnout, GPHC

INTRODUCTION

Burnout is a self-reported job-related syndrome which is recognized as a critical factor affecting physicians and their patients.[2] It includes emotional exhaustion (EE), depersonalization (DP), and low personal accomplishment (PA). Physicians experiencing burnout are reported to be at a higher risk of making poor decisions, display hostile attitudes toward patients, make more medical errors, and have difficult relationships with co-workers.[3]
Quite often physicians are exposed to high levels of work-related stress. The demanding pace, patient load, time pressures and emotional intensity at work can put physicians at greater risk of experiencing mental disorders, substance abuse, suicide, and impairment in functioning.[4] Other factors that are associated with burnout include: role conflict, role ambiguity, lack of support from supervisors, the severity of patient problems, frequency of contact with chronically or terminally ill patients and confrontation with death and dying.[9] Workload-related factors, such as long working hours, frequency of on-call duties and work-home interference have been identified as determinants of job strain and burnout.[10] In addition, stress in the workplace and job satisfaction are also factors associated with burnout.[11]

In the occupational medical setting of some European countries with elaborated social security systems – notably Sweden and The Netherlands – burnout is an established medical diagnosis. This means that physicians and other health professionals are trained in assessing and treating burnout. Furthermore, psychologists, social workers, psychiatrists, counselors, human services officers and organizational consultants offer a wide array of interventions, ranging from individual treatment programs via preventive workshops to organizational consultancy.

The future of burnout lies in the realization that it constitutes the negative pole of a continuum of employee well-being, of which work engagement constitutes the opposite positive pole.

With regards to burnout, it is to be foreseen whether corporations and public sector organizations are willing to provide the necessary resources for their employees, or extraordinary efforts become a new source of burnout.

Burnout is highly under-recognized and affects doctors at GPHC. The primary objective of this study was to assess the prevalence of physician burnout at GPHC. The secondary objectives were to determine whether demographics, specialties, designation or any other contributing factors influence burnout rate. The findings are intended is to raise awareness, open doors and create new approaches to combat burnout. This will have a positive impact on physician's wellbeing and thus improve patient care. This is the first cross sectional study of burnout among physicians in various designations and specialties at GPHC.

MATERIALS AND METHODS

This is a cross-sectional study carried out among medical physicians using a validated questionnaire during April 2021 at GPHC. A hard copy of the Maslach questionnaire and an additional questionnaire with demographics was used in this survey. Approval was granted for the additional questionnaire. The participants included: government medical officers (GMOs), residents, registrars, and consultants.

A total of 250 questionnaires were distributed to 20 departments at GPHC of which, 173 physicians responded from 18 departments. The questionnaires were collected, scored and participants categorized according to the standard scoring system. The 22-item questionnaire was rated on a Likert scale from 0 to 6 (0 =never, 1 =a few times per year, 2 =once a month, 3 =a few times per month, 4 =once a week, 5 =a few times per week, and 6 =every day). It is designed to assess the three primary dimensions of burnout: emotional exhaustion, depersonalization, and personal accomplishment. Moderate to severe burnout was detected using cutoff scores of emotional exhaustion (>/= 19), depersonalization (>/= 6) and low personal accomplishment (<40).

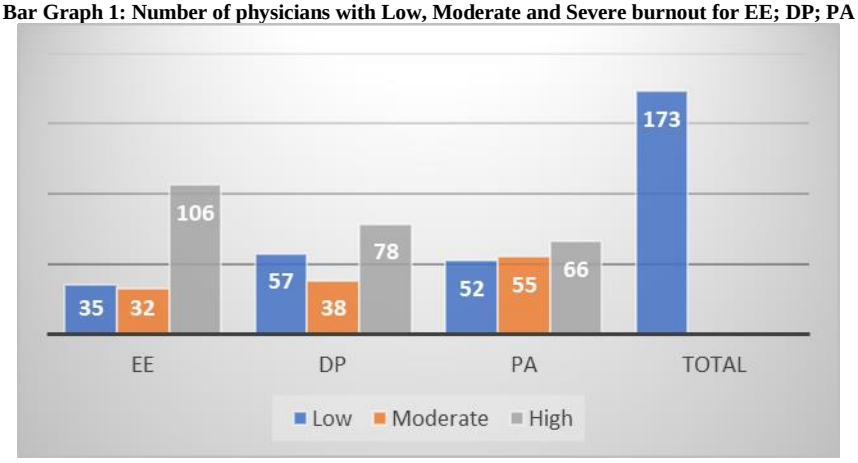
STATISTICAL METHODS

Data collected was logged in an excel spreadsheet and analyzed using Statistical Package for Social Sciences (SPSS) version 20.0. A statistical significant value was determined at $p<0.05$.

RESULTS

The average burnout score for 173 physicians from 18 departments was noted to be: Emotional exhaustion (EE) 30 (79.8%), depersonalization (DP) 10.3 (67%) and personal accomplishment (PA) 34.9 (69.9%). There were a higher number of physicians with severe burnout for each subcomponent (EE, DP, PA) as seen in graph 1.

Bar Graph 1: Number of physicians with Low, Moderate and Severe burnout for EE; DP; PA



EE: Emotional exhaustion; DP: Depersonalization; PA: Personal accomplishment

Table 1. Average EE, DP, PA scores and % of physicians with moderate to severe burnout per department:

Department	N (173)	Average EE	Average Score	%	Sig. (2-tailed)	Average DP	Average Score	%	Sig. (2-tailed)	Average PA	Average Score	%	Sig. (2-tailed)
OBGYN	38	32.4	Severe	81.6	***.255***	12.8	Severe	71.1	***.159***	34.8	Moderate	57.9	***.398***
A & E	19	32.6	Severe	89.5	***.261***	12.8	Severe	94.7	***.051***	30	Severe	84.2	***.024***
General Surg	19	28.7	Severe	84.2	***.605***	9.2	Moderate	57.9	***.610***	33.9	Severe	84.2	***.544***
IM	17	37.2	Severe	100	***.003***	11.6	Severe	82.4	***.383***	34.6	Moderate	82.4	***.832***
Paediatrics	16	32.3	Severe	87.5	***.497***	11	Severe	75	***.593***	36.6	Moderate	62.5	***.543***
Anaesthesia	12	27.7	Severe	75	***.474***	6.9	Moderate	66.7	***.013***	36.4	Moderate	83.3	***.282***
Psychiatry	9	20.2	Moderate	66.7	***.002***	3.6	Low	22.2	***.000292***	40	Low	55.6	***.001***
OVH	8	33.4	Severe	87.5	***.566***	12.1	Severe	87.5	***.464***	38.1	Moderate	62.5	***.171***
Opthalmology	7	29.3	Severe	71.4	***.888***	8.3	Moderate	71.4	***.299***	36.7	Moderate	42.9	***.522***
Trans & Vas	6	17.7	Low	33.3	***.152***	6	Moderate	33.3	***.150***	36.5	Moderate	33.3	***.833***
ICU	5	29.8	Severe	60	***.974***	7	Moderate	40	***.354***	39.6	Low	40	***.003***
MOPD	4	14.6	Low	50	***.045***	8.5	Moderate	75	***.604***	33.5	Severe	75	***.777***
Orthopaedics	4	39	Severe	100	***.205***	21.3	Severe	75	***.360***	29.5	Severe	75	***.596***
Urology	4	17.5	Low	50	***.062***	4	Low	25	***.038***	38.3	Moderate	50	***.515***
Oncology	1	14	Low		a	2	Low		a	33	Severe		a
Maxilofacial	1	34	Severe		a	3	Low		a	44	Low		a
ENT`	1	9	Low		a	3	Low		a	26	Severe		a
Pathology	1	34	Severe		a	18	Severe		a	29	Severe		a

A & E – Accident and Emergency; OVH – Ocean View Hospital;
OBGYN – Obstetrics and Gynaecology
IM – Internal Medicine
ICU -Intensive Care Unit
MOPD – Medical Outpatient Department
ENT – Ears, Nose and Throat
a - cannot be computed because the sum of case weights is less than or equal 1.

Table 1 shows the average EE, DP and PA scores for physicians with moderate to severe burnout per department. Internal Medicine (IM) and Orthopedics had 100% (n=17; ***p value-***

.003) and (n=4; *p value*-.205) moderate to severe EE. Accident and Emergency (A&E) had 94.7% of moderate to severe DP (***p value*- 0.051**). The participants with the lowest sense of PA were from A&E and General Surgery representing 84.2 %, (n=16; ***p value*-0.024**) and (n=16; *p value*-0.544) respectively. There were four departments with only one participant (ENT, Maxillofacial, Pathology and Oncology). Statistical significance could not be calculated for these departments.

Table 2: Average EE, DP and PA by designation

One-Sample Test						
	EE Mean	Test Value=30	DP Mean	Test Value=10	PA Mean	Test Value=34.9
		Sig. (2-tailed)		Sig. (2-tailed)		Sig. (2-tailed)
Consultant	25	***.262***	11.6	***.699***	33.7	***.715***
Registrar	27.8	***.258***	8.7	***.193***	35	***.949***
Resident	34.5	***.001***	12.6	***.069***	34.6	***.733***
GMO	28.6	***.422***	9.4	***.480***	35.2	***.768***

GMO – Government Medical Officer

Bar Graph 2: Average EE, DP and PA score by designation for each department

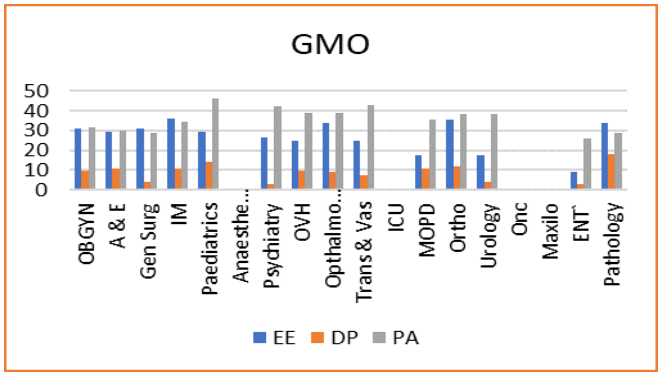


Table 2 shows the average EE, DP and PA for each physician's designation. Residents had the highest average of EE and DP at 34.5 (*p value*-0.001) and 12.6 (*p value*-0.069) respectively. Graph 2 demonstrates the EE, DP and PA for each department. Consultants have low PA while the remaining designations had a high EE and DP and low PA.

Table 3: % of physicians with moderate to severe burnout according to demographics

Demographics				**% Of moderate to severe**					
Parameter		**N**	**%**	**EE**	**Sig. (2-tailed)**	**DP**	**Sig. (2-tailed)**	**PA**	**Sig. (2-tailed)**
Sex	Male	72	41.60%	75% (n=54)	***.190***	65.3% (n-=47)	***.958***	62.5% (n=45)	***.824***
	Female	101	58.40%	83.2% (n=84)	***.266***	68.3% (n=69)	***.977***	75.2% (n=76)	***.832***
	Total	**173**	**100%**	**138**		**116**		**121**	
Age	>60	3	1.7%	33.3% (n=1)	***.055***	66.7% (n=2)	***.074***	0%	***.031***
	50-59	8	4.6%	62.5% (n=5)	***.428***	50% (n=4)	***.883***	100% (n=8)	***.358***
	40-49	17	9.8%	58.8% (n=10)	***.593***	58.8% (n=10)	***.932***	58.8% (n=10)	***.330***
	30-39	94	54.3%	87.2% (n=82)	***.081***	68% (n=64)	***.407***	71.3% (n=67)	***.474***
	20-29	51	29.5%	78.4% (n=40)	***.310***	70.6% (n=36)	***.132***	70.6% (n=36)	***.572***
	Total	**173**	**100%**	**138**		**116**		**121**	
Race	Mixed	55	31.8%	89.6% (n=60)	***.308***	90.9% (n=50)	***.080***	87.3% (n=48)	***.572***
	African	39	22.5%	72.7% (n=40)	***.397***	63.6% (n=35)	***.647***	69% (n=38)	***.698***
	East Indian	67	38.7%	76.9% (n=30)	***.020***	61.5% (n=24)	***.092***	71.8% (n=28)	***.269***
	Amerindian	5	2.9%	100% (n=5)	***.923***	80% (n=4)	***.872***	40% (n=2)	***.119***
	Chinese	5	2.9%	40% (n=2)	***.149***	60% (n=3)	***.483***	60% (n=3)	***.516***
	European	1	0.6%	100% (n=1)		0%		100% (n=1)	
	Portuguese	1	0.6%	0%		0%		100% (n=1)	
	Total	**173**	**100%**	**138**		**116**		**121**	

Table 3 To Be Continued…									
Marital Status	Married	86	49.7%	76.7% (n=66)	***.524***	65.1% (n=56)	***.974***	67.4% (n=58)	***.687***
	Single	70	40.5%	84.3% (n=59)	***.458***	71.4% (n=50)	***.681***	75.7% (n=53)	***.625***
	Common Law	9	5.2%	66.7% (n=6)	***.516***	66.7% (n=6)	***.780***	77.8% (n=7)	***.907***
	Divorced	5	2.9%	80% (n=4)	***.561***	40% (n=2)	***.917***	60% (n=3)	***.044***
	Other	1	0.6%	100% (n=1)		100% (n=1)		0	
	Unknown	2	1.2%	100% (n=2)		50% (n=1)		0	
	Total	**173**	**100%**	**138**		**116**		**121**	

Table 3 depicts the percentage of physicians with moderate to severe burnout according to demographic characteristics. There was a higher number of female physicians [58.4% (n=101)]. The most prevalent age group was 30-39 years [54.3% (n=94)]. The majority of the participants were of East Indian descent at 38.7% (n=67). Married physicians represented 49.7% (n=86). Physicians who were single had a higher degree of burnout.

Table 4: All other variables - possible influencing factors of burnout among physicians

One-Sample Test									
	N	**Mean**	**Test Value = 30 Sig. (2-tailed)**	**N**	**Mean**	**Test Value = 10.3 Sig. (2-tailed)**	**N**	**Mean**	**Test Value = 34.9 Sig. (2-tailed)**
Shift - yes	48	33.8542	***.027***	48	13.9375	***.026***	48	32.0625	***.022***
Shift - no	125	28.4720	***.179***	125	8.9200	***.039***	125	35.9600	***.149***
On-call - yes	142	29.8451	***.882***	142	9.6690	***.312***	142	35.2042	***.670***
On-call - no	31	30.5161	***.832***	31	13.2581	***.222***	31	33.3871	***.280***
Overtime – yes	28	28.4286	***.523***	28	10.6071	***.791***	28	33.8214	***.519***
Overtime – no	144	30.1806	***.863***	144	10.2361	***.934***	144	35.0833	***.792***
Overtime_1 - 5_hrs	9	28.3333	***.694***	9	12.4444	***.329***	9	32.8889	***.524***
Overtime_10 - 15_hrs	2	37.0000	***.722***	2	12.5000	***.643***	2	37.0000	***.692***
Overtime_above_20_hrs	7	28.7143	***.757***	7	11.7143	***.441***	7	30.7143	***.208***
Per_week_30 - 39_hrs	1[a]	21.0000		1[a]	1.0000		1[a]	45.0000	
Per_week_46 - 50_hrs	27	33.1481	***.191***	27	13.2222	***.188***	27	35.0741	***.898***
Per_week_above_65 hrs	77	31.7922	***.191***	77	10.4416	***.878***	77	35.1948	***.774***
Patients_below - 20	86	28.5349	***.300***	86	8.5814	***.016***	86	35.0116	***.901***
Patients_21 – 30	50	32.2000	***.236***	50	13.4200	***.085***	50	34.0600	***.549***
Patients_above_60	6	28.6667	***.640***	6	10.3333	***.989***	6	36.0000	***.630***
More_time_at_work - yes	140	31.0429	***.317***	140	10.4500	***.833***	140	34.5929	***.679***
More_time_at_work - no	30	26.4667	***.130***	30	9.8667	***.826***	30	36.0333	***.325***
Work_schedule_affects_family - yes	140	32.2857	***.023***	140	11.3143	***.198***	140	34.3214	***.419***
Work_schedule_affects_family - no	31	20.0968	***0.000023***	31	5.8065	***2.3125E-7***	31	37.5806	***.065***
Satisfied with schedule - yes	59	23.3390	***0.000189***	59	7.9492	***.080***	59	38.0169	***.010***
Satisfied with schedule - no	110	33.7818	***0.000303***	110	11.3727	***.148***	110	33.2818	***.029***
Activity outside work - yes	60	25.2500	***.005***	60	7.8000	***.016***	60	35.9833	***.350***
Activity outside work - no	111	32.6847	***.018***	111	11.6757	***.112***	111	34.3333	***.462***
Income satisfies - Sometimes	74	29.9054	***.948***	74	9.2568	***.172***	74	35.7568	***.374***
Income satisfies - Always	6	26.0000	***.554***	6	14.6667	***.634***	6	36.0000	***.742***
Income satisfies - Never	56	32.8571	***.065***	56	10.7143	***.635***	56	33.2679	***.131***
Income satisfies - Often	34	26.5000	***.149***	34	11.3529	***.630***	34	35.4706	***.729***

a. t cannot be computed because the sum of case weights is less than or equal 1.

Table 4 shows factors that may influence physician burnout. Working shifts was statistically significant for all 3 burnout dimensions (EE (p value-0.027 [95% CI: 0.4658; 7.2425]); DP (p value-0.026 [95% CI: 0.4564; 6.8186]); PA (p value-0.022 [95% CI: -5.2502; -.4248]).

Physicians who worked on call and shifts only were 68.8% (n=119) and 15.6% (n=27) respectively. Only 15% (n=26) of physicians work overtime. Of the 140 physicians who responded that they spent more time at work than at home 81.4% (n=114); 68.6% (n=96) and 70.7% (n=99) had moderate to severe EE; DP and PA respectively. A total of 110 (63.6%) physicians were not satisfied with their work schedule. Of these, 97 (56%); 84 (45.6%) and 81 (46.8%) had moderate to severe EE; DP and PA respectively. Of the 77 (44.5%) physicians who worked more than 65 hours per week, 83.1% (n=64); 68.8% (n=53) and 70% (n=54) had moderate to severe EE; DP and PA respectively. A total of 85 (49.1%) doctors saw < 20 patients daily, of these 64 (75.3%); 51(60%); 59(69.4%) had moderate to severe EE; DP and PA respectively. A total of 50 (28.9%) doctors saw 21 to 30 patients per day, these had moderate to severe burnout scores; EE 42 (84%), DP 38 (76%) and PA 33 (66%). Of 173 doctors 73 responded that their income satisfied their personal needs sometimes, of these 61(83.6%); 49 (67.1%); 50 (68.5%) had moderate to severe EE; DP and PA respectively. Physicians whose income never satisfied their needs n= 56 had a higher EE average of 32.9 (*p value*-0.065). Those who did not partake in any activity outside of work, 64.2% (n=111): 99 (89.2%); 83 (74.8%); 82 (73.9%) had moderate to severe EE; DP and PA respectively. Doctors who had no time to participate in activities represented 39.6% (n= 44). Those who were too tired to partake in activities outside of work represented 16.2% (n=18).

DISCUSSION

Physicians who are burnt out can directly affect the quality of health care provided for patients. This can have a negative impact on patient care and satisfaction. Burnout doctors are more prone to malpractice and withdrawal from work. Studies have also shown that burnout can lead to higher rates of alcohol consumption, drug use and suicide.

The prevalence of overall burnout subcomponents was similar to the prevalence in China,[13] however significantly higher than the United States.[15] Physicians were more emotionally exhausted in comparison to those that were affected by depersonalization and those with a low sense of personal accomplishment.

Upon evaluation of the burnout rate for each department, physicians from Internal Medicine and Orthopedics were the most emotionally exhausted because they worked more than sixty hours weekly and attended an average of 20-30 patients daily. Most of these physicians also were not satisfied with their schedule and stated that this affected their family time. Orthopaedics, Obstetrics and Gynecology, Accident &Emergency (A&E) and Pathology had the highest rate of depersonalization due to the fact that they worked more than 50 hours weekly. Almost all of these doctors spent more time at work and were not satisfied with their schedule.

Ear Nose and Throat (ENT), A&E and Pathology had a low sense of PA. This indicated that the severity of burnout did not affect the physician's sense of personal accomplishment because they were younger (20-29 years old) and attended to less than 20 patients per day. A high percentage of these physicians were not satisfied with their work schedule which affected their family life.

These results from this study differs from a survey conducted by Medscape in 2019 - where Urology, Neurology and physical medicine and rehabilitation were the most burnt out.[16]

Residents had the highest rate of burnout for EE, which was statistically significant.

Residents also had the highest rate of depersonalization followed by registrars; however, it was not statistically significant. Residents in their thirties had a high rate of burnout however it was not statistically significant. The prevalence of burnout for residents in this study was higher than the prevalence in China[19] and Seria.[20]

Females were overall more burnt out compared to male physicians and stated that their job affected their family life. Physicians who worked shifts had statistically significant burnout in all three subcomponents. Only three departments worked shifts: ObGyn, A&E and Ocean View Hospital (OVH). This appears to be a contributing factor to the moderate to severe burnout experienced by these departments.

Physicians who participated in activities outside of work, those who were satisfied with their work schedule and those whose work schedule did not affect their family/personal life were less burnt out and this was statistically significant. Physicians who did not participate in activities outside of work, were not satisfied with their work schedule and their work schedule did affect their family/personal life were more burnt out and this was also statistically significant. Physicians, whose income never satisfied their needs, were more burnt out however this was not statistically significant. These results correlate with other studies that have similar influencing factors for burnout.[9,10,11]

The strengths of this study included: it was the first study of its kind at GPHC, physicians of all designations participated and 18 departments were included. This data can be used to intervene and improve the health and well- being of our physicians.

Limitations included: that the entirety of the physicians at GPHC was not represented, hence the prevalence, causes and effects of burnout only represented a subset of physicians working at GPHC.

From this study it can be concluded that the prevalence of physician burnout at GPHC is EE 79.8%, DP 67% and PA 69.9%.

The contributing factors are: working shift system, working > 65 hours per week, attending to < 20 patients per day, being enrolled in a residency program and working in the department of Internal Medicine. Other factors include unsatisfied work schedule, no recreational activity, female gender, single status and age range 20-39 years.

CONCLUSION

Understanding occupation burnout and taking measures to combat the same are of great importance to maintain the health of physicians. Some recommendations to prevent physician burnout are: provision of an area for recreational activity (e.g. gym, indoor and outdoor games), a food court with healthy food options, providing psychologists/counsellors for physicians in each department can be beneficial in the future and wellness activities.[18]

Acknowledgements: *Sabrina Gittens, Radha Sookraj, Amanda Gray*

Conflict of Interest: None

Source of Funding: None

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How to cite this article: Nirvanie Singh, Radha R. Sookraj, Sabrina Gittens. Physician burnout at Georgetown public hospital (GPHC): the hidden health worker crisis. *International Journal of Research and Review*. 2022; 9(9): 194-202.
DOI: *https://doi.org/10.52403/ijrr.20220920*

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