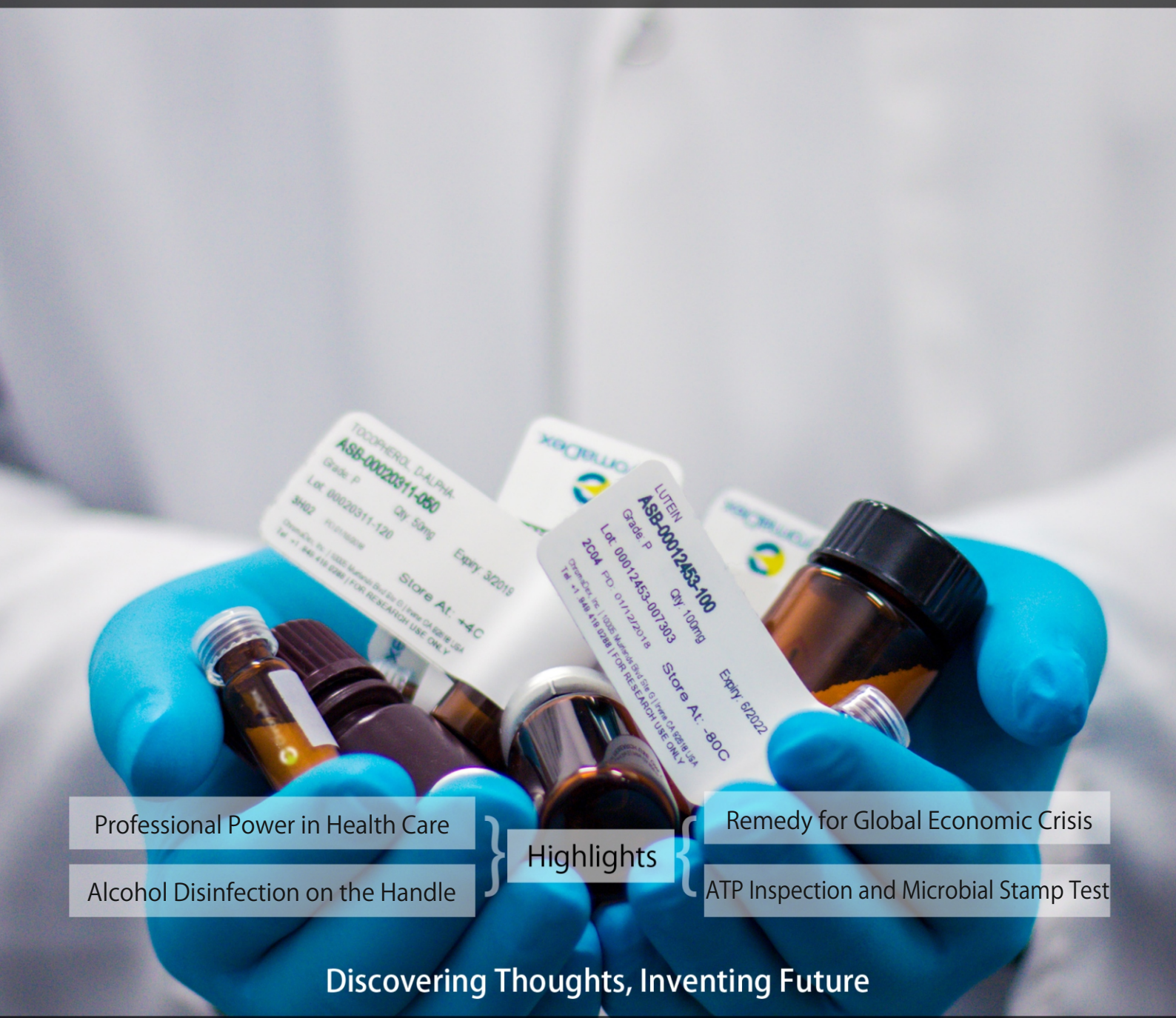


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Interdisciplinary



Professional Power in Health Care

Alcohol Disinfection on the Handle

Highlights

Remedy for Global Economic Crisis

ATP Inspection and Microbial Stamp Test

Discovering Thoughts, Inventing Future



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VOLUME 20 ISSUE 12 (VER. 1.0)

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GLOBAL JOURNAL OF MEDICAL RESEARCH: K
INTERDISCIPLINARY
Volume 20 Issue 12 Version 1.0 Year 2020
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Effect of Alcohol Disinfection on the Handle and Blade of Meat and Fish Knives by using ATP Inspection and Microbial Stamp Test

By Akemi Ito, Naomi Katayama, Mayumi Hirabayashi, Natuki Sasaki & Moe Inuzuka
Nagoya Women's University

Abstract- It is valid to show the cooks a visual hygiene test result to prevent food poisoning. Therefore, in this study, for hygiene control of the handle and blade of frequently used kitchen knives, we report inspections using the ATP wiping test and microbial stamp test. The results of the ATP wiping test showed that the ATP value decreased statistically significantly after washing compared to after cooking, and after 70% alcohol spraying compared to after washing. A microbial stamp test (general bacteria, Escherichia coli, staphylococcus aureus, Salmonella, Vibrio parahaemolyticus) was also performed at the same time as the ATP test. As a result, the number of bacteria did not change much or decreased even after washing or spraying with 70% alcohol. In particular, Escherichia coli, staphylococcus aureus were found to be difficult to decrease even after 70% alcohol sprayings. In the future, it will be necessary to consider increasing the number of alcohol sprays of hygiene management using sodium hypochlorite.

Keywords: ATP test, microbial stamp test, the handle of the knife, the blade of the knife, alcohol disinfection.

GJMR-K Classification: NLMC Code: QW 25.5.M6



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Effect of Alcohol Disinfection on the Handle and Blade of Meat and Fish Knives by using ATP Inspection and Microbial Stamp Test

Akemi Ito ^α, Naomi Katayama ^σ, Mayumi Hirabayashi ^ρ, Natuki Sasaki ^ω & Moe Inuzuka [¥]

Abstract- It is valid to show the cooks a visual hygiene test result to prevent food poisoning. Therefore, in this study, for hygiene control of the handle and blade of frequently used kitchen knives, we report inspections using the ATP wiping test and microbial stamp test. The results of the ATP wiping test showed that the ATP value decreased statistically significantly after washing compared to after cooking, and after 70% alcohol spraying compared to after washing. A microbial stamp test (general bacteria, *Escherichia coli*, *staphylococcus aureus*, *Salmonella*, *Vibrio parahaemolyticus*) was also performed at the same time as the ATP test. As a result, the number of bacteria did not change much or decreased even after washing or spraying with 70% alcohol. In particular, *Escherichia coli*, *staphylococcus aureus* were found to be difficult to decrease even after 70% alcohol sprayings. In the future, it will be necessary to consider increasing the number of alcohol sprays of hygiene management using sodium hypochlorite.

Keywords: ATP test, microbial stamp test, the handle of the knife, the blade of the knife, alcohol disinfection.

I. INTRODUCTION

Hygiene management in the kitchen needs to do daily to prevent food poisoning. The number of food poisoning cases in Japan is high in ordinary households, and the number of victims is high in business establishments. If food poisoning occurs at a school lunch site, it will be a serious situation such as suspension of business, on-site inspection of the health center, transportation of patients to a hospital, and financial security for victims. In some cases, the lunch facility company will be closed, and the lunch service company will force to close. Currently, the kitchen is required to have a more severe sanitary environment due to the COVID-19 epidemic. Therefore, this study focuses on kitchen knives, which are cooking utensils that are highly likely to be involved in food poisoning in the kitchen, and reports the results of the tests using the ATP test and the microbial stamp test. The kitchen knives compared the inspection results on both the handle and the blade.

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II. MATERIALS AND METHODS

a) Hygiene tests on Kitchen knife

Hygiene tests on six meat and fish knives performed using the ATP test kit (KIKKOMAN CO., Ltd.) and the microbial stamp test kit (NISSUI Co., Ltd.).

b) ATP wiping tests

ATP wiping tests performed on the handles and blades of 6 meat and fish knives. The ATP test was performed by the inspector three times immediately after cooking, after washing, and after spraying 70% alcohol. The inspector recorded the ATP test results.

c) Microbial stamp test

And the inspector performed a microbial stamp test as same as ATP tests (three times: after cooking, after washing, and after spraying alcohol). The microbial stamp was then cultured in an incubator at 38 degrees for three days. After culturing, microbial stamps were counted and recorded by the inspector.

d) Statistical processing

The results obtained compared using statistical methods. Compared data were subjected to an F test to determine whether to use a parametric test or nonparametric test. When there is no difference in the F test, the presence or absence of a significant difference was confirmed using the student t-test with or without a correspondence. If there was a difference in the F test, the presence or absence of a significant difference was confirmed using the Wilcoxon test with a pair or the Mann-Whitney test without correlation.

III. RESULTS

a) Meat and fish knife: ATP results and microorganisms stamp test results of Alcohol disinfection

ATP test results of kitchen knife handle and blade

The ATP test results show in Table 1 (kitchen knife handle) and Table 2 (kitchen knife blade). In both cases, the ATP value is lower after washing than after cooking, but it did not fall below the target value of 100. However, after spraying with 70% alcohol, the ATP value was 100 or less. Alcohol spray can be said to be effective in hygiene management of kitchen knife handle and blade.

Table1. ATP test value and statistical processing result of Kitchen knife Handle

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	113485	5426	5426	29
2	6915	873	873	41
3	813312	18399	18399	13
4	9631	1372	1372	9
5	10514	7055	7055	36
6	773	572	572	46
Average value	159105.0	5616.2	5616.2	29.0
SD	323332.8	6803.8	6803.8	15.1
F test	P=0.0001**		P=0.0001**	
Student-t*				
Wilcoxon	P=0.028*		P=0.028*	
F test	P=0.0001**			
Student-t*				
Wilcoxon	P=0.028*			

*Paired Student-t test * P<0.05, ** P<0.01

Table2. ATP test value and statistical processing result of Kitchen knife Blade

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	22404	247	247	8
2	96	661	661	12
3	393798	2701	2701	77
4	1125	63	63	63
5	23009	4260	4260	25
6	1638	894	894	30
Average value	73678.3	1471.0	1471.0	35.8
SD	157188.5	1659.0	1659.0	28.0
F test	P=0.0001**		P=0.0001**	
Student-t*				
Wilcoxon	P=0.046*		P=0.043*	
F test	P=0.0001**			
Student-t*				
Wilcoxon	P=0.028*			

*Paired Student-t test * P<0.05, ** P<0.01

b) Microorganisms stamp test results of kitchen knife handle and blade

The results of the microbial stamp test (general bacteria) show in Table 3 (kitchen knife handle) and Table 4 (kitchen knife blade).

Table 3 Number of general bacteria on Kitchen knife Handle and statistical processing result

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	14	41	41	0
2	2	20	20	3
3	123	150	150	16
4	4	31	31	0
5	65	41	41	9
6	18	5	5	1
Average value	37.7	48.0	48.0	4.8
SD	47.7	51.8	51.8	6.4
F test	P=0.423		P=0.0001**	
Student-t*	P=0.319			
Wilcoxon			P=0.028*	
F test	P=0.0001**			
Student-t*				
Wilcoxon	P=0.046*			

*Paired Student-t test * P<0.05, ** P<0.01

Table 4 Number of general bacteria on Kitchen knife Blade and statistical processing result

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	24	7	7	1
2	8	15	15	3
3	64	18	18	3
4	32	40	40	32
5	49	39	39	1
6	1	7	7	7
Average value	29.7	21.0	21.0	7.8
SD	24.0	15.0	15.0	12.0
F test	P=0.138		P=0.305	
Student-t*	P=0.348		P=0.059	
Wilcoxon				
F test	P=0.059			
Student-t*	P=0.108			
Wilcoxon				

*Paired Student-t test * P<0.05, ** P<0.01

The results of the microbial stamp test showed that the number of bacteria did not change much after cooking and after washing. Still, the number of bacteria decreased after spraying with 70% alcohol.

The results of the microbial stamp test (E Coli) show in Table 5 (kitchen knife handle) and Table 6 (kitchen knife blade). The results of the microbial stamp

test showed that the number of bacteria changed much after cooking and after washing. But the number of bacteria did not decrease after spraying with 70% alcohol for the kitchen knife handle. The knife blade had a reduced number of microorganisms after 70% alcohol sprayings.

Table 5 Number of E. coli on Kitchen knife Handle and statistical processing result

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	3	2	2	0
2	2	8	8	27
3	161	5	5	3
4	1	1	1	0
5	1	1	1	0
6	0	0	0	6
Average value	28.0	2.8	2.8	6.0
SD	65.2	3.1	3.1	10.6
F test	P=0.0001**		P=0.004**	
Student-t*				
Wilcoxon	P=0.593		P=0.0917	
F test	P=0.0001**			
Student-t*				
Wilcoxon	P=0.753			

*Paired Student-t test * P<0.05, ** P<0.01

Table 6 Number of E. coli on Kitchen knife Blade and statistical processing result

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	2	2	2	1
2	1	0	0	1
3	163	60	60	0
4	0	0	0	0
5	2	1	1	0
6	0	0	0	0
Average value	28.0	10.5	10.5	0.3
SD	66.1	24.3	24.3	0.5
F test	P=0.014*		P=0.0001**	
Student-t*				
Wilcoxon	P=0.109		P=273	
F test	P=0.0001**			
Student-t*				
Wilcoxon	P=0.109			

*Paired Student-t test * P<0.05, ** P<0.01

The results of the microbial stamp test (Staphylococcus aureus) show in Table 7 (kitchen knife handle) and Table 8 (kitchen knife blade). The results of the microbial stamp test showed that the number of

bacteria did not change much after cooking and after washing. Still, the number of bacteria decreased after spraying with 70% alcohol.

Table 7 Number of Staphylococcus aureus on Kitchen knife Handle and statistical processing result

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	9	1	1	0
2	7	9	9	5
3	0	1	1	10
4	0	1	1	2
5	26	1	1	70
6	9	12	12	11
Average value	8.5	4.2	4.2	16.3
SD	9.5	5.0	5.0	26.6
F test	P=0.071		P=0.0001**	
Student-t*	P=0.374			
Wilcoxon			P=0.600	
F test	P=0.012*			
Student-t*				
Wilcoxon	P=0.345			

*Paired Student-t test * P<0.05, ** P<0.01

Table 8 Number of Staphylococcus aureus on Kitchen knife Blade and statistical processing result

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	21	0	0	0
2	30	136	136	0
3	1	250	250	2
4	117	2	2	0
5	29	4	4	0
6	0	3	3	0
Average value	33.0	65.8	65.8	0.3
SD	43.2	104.9	104.9	0.8
F test	P=0.024*		P=0.0001**	
Student-t*				
Wilcoxon	P=0.917		P=0.043*	
F test			P=0.0001**	
Student-t*				
Wilcoxon			P=0.080	

*Paired Student-t test * P<0.05, ** P<0.01

The results of the microbial stamp test (Salmonella) show in Table 9 (kitchen knife handle) and Table 10 (kitchen knife blade). The results of the microbial stamp test showed that the number of bacteria changed much after cooking and after washing. And the number of bacteria decreased after spraying with 70%alcohol.

Table 9 Number of Salmonella on Kitchen knife Handle and statistical processing result

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	3	0	0	0
2	0	11	11	1
3	0	1	1	0
4	0	0	0	0
5	42	0	0	0
6	17	0	0	0
Average value	10.3	2.0	2.0	0.2
SD	16.9	4.4	4.4	0.4
F test	P=0.0001**		P=0.0001**	
Student-t*				
Wilcoxon	P=-0.128		P=0.180	
F test			P=0.0001**	
Student-t*				
Wilcoxon			P=0.144	

*Paired Student-t test * P<0.05, ** P<0.01

Table 10 Number of Salmonella on Kitchen knife Blade. and statistical processing result

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	2	0	0	0
2	24	5	5	1
3	0	0	0	0
4	1	0	0	0
5	47	1	1	0
6	25	0	0	0
Average value	16.5	1.0	1.0	0.2
SD	18.9	2.0	2.0	0.4
F test	P=0.0001**		P=0.001**	
Student-t*				
Wilcoxon	P=0.43*		P=0.180	
F test			P=0.0001**	
Student-t*				
Wilcoxon			P=0.043*	

*Paired Student-t test * P<0.05, ** P<0.01

The results of the microbial stamp test (Vibrio parahaemolyticus) show in Table 11 (kitchen knife handle) and Table 12 (kitchen knife blade). The results of the microbial stamp test showed that the number of bacteria changed much after cooking and after washing. And the number of bacteria decreased after spraying with 70%alcohol.

Table 11 Number of *Vibrio parahaemolyticus* on Kitchen knife Handle and statistical processing result

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	0	0	0	0
2	0	27	27	0
3	102	0	0	0
4	0	0	0	2
5	37	1	1	3
6	0	0	0	1
Average value	23.2	4.7	4.7	1.0
SD	41.4	10.9	10.9	1.3
F test	P=0.003**		P=0.0001**	
Student-t*				
Wilcoxon	P=0.285		P=0.715	
F test			P=0.0001**	
Student-t*				
Wilcoxon			P=0.465	

*Paired Student-t test * P<0.05, ** P<0.01

Table 12 Number of *Vibrio parahaemolyticus* on Kitchen knife Blade and statistical processing result

For meat	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	1	0	0	0
2	0	0	0	0
3	1	1	1	0
4	0	0	0	0
5	0	0	0	0
6	4	1	1	1
Average value	1.0	0.3	0.3	0.2
SD	1.5	0.5	0.5	0.4
F test	P=0.009**		P=0.291	
Student-t*			P=363	
Wilcoxon	P=0.180			
F test			P=0.002**	
Student-t*				
Wilcoxon			P=0.109	

*Paired Student-t test * P<0.05, ** P<0.01

IV. DISCUSSION

In the previous research report, we were able to reduce the ATP value to 100 or less by washing the handle and blade of the knife with running water for 30 seconds or more¹⁾. This time, we further examined hygiene management using alcohol to protect the safety and security of meals, even in an environment where COVID-19 is prevalent. It is costly to manage the hygiene of the handle and blade of the kitchen knife using 70% alcohol, but we thought that it would be safer. In addition to the ATP test, a microbial stamp test was also performed at the same time to confirm whether food poisoning bacteria were reduced. As a result, in most cases, the number of bacteria decreased after spraying 70% alcohol as compared with after washing. In *Escherichia coli* (*E. Coli*) and *Staphylococcus aureus*, the number of bacteria increased after 70% alcohol sprays on the knife blade compared with after washing. We think it is necessary to spray alcohol more firmly. Many reports have been made on ATP wiping tests for hospital meals^{2,3)} and business meals^{4,5)}. Hygiene education is provided by instructing cooks on the hygienic handling of cooking utensils^{6,7)}. In addition to the ATP wiping test^{8,9)}, we believe that cooking utensils can be handled more hygienically by conducting a microbial stamp test at the same time.

V. CONCLUSIONS

Microbial tests performed on the handles and blades of kitchen knives in kitchens where hygienic handling is required, after cooking, cleaning, and spraying with 70% alcohol. ATP wiping test and microbial stamp test used for the test. As a result, it was found that the number of microorganisms decreased after 70% alcohol spraying, but *E. Coli* and *Staphylococcus aureus* did not decrease simply. In the future, we would like to report the results of sterilizing the handle and blade of the kitchen knife by spraying 70% alcohol more firmly.

ACKNOWLEDGMENTS

We would like to thank all the cooks who participated in this experiment. Also, we would like to thank the inspectors who also performed the ATP inspection.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Katayama N, Ito A, Hirabayashi M, Kondo S, Nakayama Y, Naka A, Aasaki N, Inuzuka M, Tamura T. Results of Hygiene Education of Kitchen Knife by using ATP Inspection –Comparison of Handle and Blade: (2020) *Global Journals Medical Research* 20(5): 1-6.
2. Nante N, Ceriale E, Messina G, Lenzi D, Manzi P. Effectiveness of ATP bioluminescence to assess

hospital cleaning: a review. (2017) *J Prev. Med. Hyg.* 58(2): E177-E183.

3. Amodio E, Dubi C. Use of ATP bioluminescence for assessing cleanliness of hospital surfaces: a review of the published literature (1990-2012). (2014) *J infect Public Health* 7(2): 92-98.
4. Aycieck H, Oquz U, Karci K. Comparison of results of ATP bioluminescence and traditional hygiene swabbing methods for the determination of surface cleanliness at a hospital kitchen. (2006). *Int J Hyg Environ Health.* 209(2): 203-206.
5. Osimani A, Garofalo C, Clementi F, Tavoletti S, Aquilanti L. Bioluminescence ATP monitoring for the routine assessment of food contact surface cleanliness in a university canteen. (2014). *Int J Environ Res Public Health* 17; 11(10): 10824-10837.
6. Lee JH (2018) An investigation of Factors that influence Hygiene Practices at a small Day Care Center. (2018). *J Food Prot.* 81(1): 158-164.
7. Stanley PE. A review of bioluminescent STP techniques in rapid microbiology. (1989) *J Biolumin Chemilumin* 4(1): 375-380.
8. Griffith CJ, Cooper RA, Gilmore J, Davies C, Lewis M. An evaluation of hospital cleaning regimes and standards. (2000) *J Hosp Infect.* 45(1): 19-28.
9. Stannard CJ, Gibbs PA. Rapid microbiology: applications of bioluminescence in the food industry—a review. (1986) *J Biolumin Chemilumin* 1(1): 3-10.





GLOBAL JOURNAL OF MEDICAL RESEARCH: K
INTERDISCIPLINARY
Volume 20 Issue 12 Version 1.0 Year 2020
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Professional Power in Health Care

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Abstract- Health care professionals exercise professional power which is set by their training, education, skills, regulation etc. 'Professions' are seen as a source of power (by the use of knowledge, skills and expertise) in professional power perspectives of theory of professions, which is mainly focuses on control over professions, dominance, autonomy and professional relationships. In this perspective, health care professionals gain such professional power from knowledge, training, education and form their interprofessional team and organisations, and professional power has a great influence in determining professional behaviour and dominance. As a result of advancement in therapeutic technologies, emergence of new specialities in health care and managerial control, power dynamics between health care professionals are changing. Relative power between health care professionals is evident and health care professionals complement to each other for flawless health services and learning from each other.

Keywords: *health care; interprofessional; professions; professional power; theory of professions.*

GJMR-K Classification: *NLMC Code: W 84*



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Professional Power in Health Care

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Abstract- Health care professionals exercise professional power which is set by their training, education, skills, regulation etc. 'Professions' are seen as a source of power (by the use of knowledge, skills and expertise) in professional power perspectives of theory of professions, which is mainly focuses on control over professions, dominance, autonomy and professional relationships. In this perspective, health care professionals gain such professional power from knowledge, training, education and form their interprofessional team and organisations, and professional power has a great influence in determining professional behaviour and dominance. As a result of advancement in therapeutic technologies, emergence of new specialities in health care and managerial control, power dynamics between health care professionals are changing. Relative power between health care professionals is evident and health care professionals complement to each other for flawless health services and learning from each other.

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I. INTRODUCTION

Health services are delivered by wide range of healthcare workers, practitioners or professionals. Healthcare professionals belong to a certain profession based on their education, training and skills. In other words, they are grouped into different professional groups categorised by their skills gained through training and formal education. Sometime a professional group can be defined by a legislation of the country they reside. Alternatively, it can be defined universally by international bodies or an institution such as the World Health Organisation or an international authority.

There are many definitions of profession. One of the frequently cited definitions of profession in the recent days is as follows defined by The Professions Australia¹:

"A profession is a disciplined group of individuals who adhere to ethical standards and who hold themselves out as, and are accepted by the public as possessing special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level, and who are prepared to apply this knowledge and exercise these skills in the interest of others."

Johnson² asserts that there was no consistent approach in defining the term profession in the early literature on this topic. The term 'profession' describes a vocation structured under a certain training or educational activity for a specific purpose. Hammicket al.³ define the word 'profession' as a group of people who have undertaken a given programme of education and/or training, and as a result of this are permitted to become part of much larger and somewhat exclusive group. Jackson⁴ describes a profession as a special type of occupation ... prolonged specialised training in a body of abstract knowledge, and a collectivity or service orientation...a vocational sub-culture which comprises implicit codes of behaviour, generates an esprit de corps among members of the same profession, and ensures them certain occupational advantages. It is observed that profession is viewed from different approaches - functional, process and power or status approaches.

There are many arguments about defining the features of a profession. Flexner⁵ states six criteria characterising a profession - *intellectual activities*, based on *science and learning*, used for *practical purposes*, which can be *taught*, and is *organised internally* and is *altruistic* (quoted in Ducanis and Golin⁶). Larson⁷ mentions that professional association, cognitive base, institutionalised training, licensing, work autonomy, colleague control and code of ethics are the main characteristic features of profession. Duncanis and Golin⁶ argue that professional standards of ethics and training are set through various professional organisations and associations. These organisations also set requirements for certification and licensure and implement them through legitimisation of power and the perpetuation of autonomy.

Different scholars cited different traits of the professions. The most commonly cited traits (Becker^{8,9} Millerson¹⁰, Larson⁷) are;

- the acquisition of skill based on abstract knowledge
- provision for training and education, usually associated with a university
- certification based on competency testing
- formal organisation
- adherence to a code of conduct

Goode¹¹ describes similar traits of professions and highlights two more characteristics of professions - 'offering a service to the community' and 'acknowledgement by others that the occupation is regarded as a profession'. Gargon¹² describes three attributes of a profession – substance, organisation and

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regulation. He describes substance as a mixture of skill, knowledge, scope and complexity of a profession. He argues that organisation was a kind of unstructured setting with flexible boundaries at the early stage of evolution in the profession and it is gaining maturity with the provision of training to enhance members' skills and development of workplace infrastructure and regulations for every profession. Gargon¹² argues that regulation for profession is about maintaining the professional boundaries and it is 'who is to control' rather 'whether to control'.

Some research scholars and authors (Goode¹³ Becker⁸⁻⁹; Millerson¹⁰; Strauss et al.¹⁴; Larson⁷) have focused on traits of professions based on the traits or characteristics that differentiate professions from other occupations. The professional trait approach mainly focuses upon at the ideal type features of a profession. However, traits approach of theory of professions does not describe the relationship between traits and does not consider power relationships between professions. Johnson² argues that traits approach assumes extreme pre-conditions for an 'ideal profession' such as 'medicine' or 'law'. This approach reflects an established view of the professions¹⁶. Strauss et al.¹⁴ argue that the trait approach in theory of professions has now moved onto work, tasks and functions. Strauss et al.¹⁴ criticise that traits of any professions are not fixed and they are subject to many factors such as change in their roles and functions.

II. PROFESSIONAL POWER

Professional power perspectives of theory of professions ignores social function in health care. Social functions of the professions advocate harmony by promoting social integration through professions and their expertise support to the society¹⁶. Social function of the professions focuses on the highest level of knowledge, community-oriented service, professional ethics or code of practice for control and rewards system. Giddens^{17,18} conceptualised power as a social factor and stated that power is created by human agents for them which limits and influences them in various ways.

The prevailing model of technical rationality with a vision of practitioners' discovering their own knowledge base from reflection in action to reflection to action^{19,20}. The study of epistemology is concerned with the nature of knowledge, questions of what is regarded as acceptable knowledge in a discipline²¹ and the justification of truth²². Rawson²² describes that interprofessional working has embraced Schon's theme. It offers liberation from the intellectual hegemony of discipline-based knowledge. According to Best and Kellner²³, interprofessional working has its philosophical roots in structuralism, post-structuralism and post-modernism; and it stresses the importance of social

context, history, power and culture in society and in medicine.

Larson⁷ developed a new approach on the theory of professions called 'professional project'. Larson⁷ suggests that professional project is an effort to transform professional skills and expertise into various benefits to society. Larson⁷ further states that exclusive knowledge in the professions is required in the professional project so that professionals can demonstrate exclusivity of knowledge. In this sense, professional project helps to determine professional identity. It is also linked with professional practice through knowledge, skills and expertise. Macdonald²⁴ asserts that professional project should be considered as a product of individual and collective actions in the social process and should be collectively practised. It does not consider other aspects of the theory of professions such as, autonomy, traits, power and dominance.

Changes in health care are linked to post modernity²⁵ as professional boundaries between health care professionals become more permeable²⁶. Biggs²⁵ argues that there has to be a balance between expertise and responsibilities. He further highlights that there is a tendency to ignore structure and differences in health sector.

Roles of health care professionals are used to identify people's behavioural strengths and weaknesses in the workplace²⁷. This information can be used to build productive working relationships, select and develop high-performing teams, raise self-awareness and personal effectiveness, build mutual trust and understanding and aid recruitment processes. Beblin²⁷ describes different nine team roles, which he called plant, resource investigators, monitor evaluators, co-ordinators, implementers, specialist, completer finishers, teamworker and shapers.

III. THEORY OF PROFESSIONS

The professional power aspect of theory of professions is important to consider when discussing the delivery and management of health care. Different health professions have their own territory, power, authority and recognition in the society and in health care organisations. The gap in territory and authority contributes to a degree of mutual suspicion and defensiveness in interprofessional care context.

Pointon¹⁵ argues that the sociology of the professions offers different views of how and why professions exist. Point on describes four approaches to the theory of professions. Firstly, 'traits model' which reflects an established view of the professions. The second approach describes the professions in terms of 'power' and privileges. The third approach considers the professions as the 'status' and public

acknowledgement. The final approach represents the professions as a 'professional project'.

In many cases health care professionals have to complement to each other by linking the main body of the health sciences to provide effective and continuous health services, and to learn from each other²⁸. According to Leggatt²⁹, interprofessional care team members learned complementary skills to provide the best health services to service users. Autonomy gives the power to health care professionals to make assessment, develop care plan and make clinical decisions based on their independent judgement, which has to be supported by evidence-based practice. Is this case autonomy complement to shared work and it does not contradict with interprofessional working in health and social care.

Canning and Dwyer³⁰ suggest that protecting professionalism and public interest are important features of the theory of professions and this can be done by registering qualified members which control entry into the profession to ensure that members meet the standards set by the regulatory body and councils.

Health care organisations provide power and authority to different health care professionals, interprofessional care teams and sub units. The power of such a sub unit is 'determined by its relationships to other sub units in the organisation, and by its response to its environment'³¹. Clegg³¹ further asserts that different sub-units in organisations receive power based on functional inter-relationships. However, this concept is focused on the power of managers in a pure management environment, rather than the power of trained and specialised health care professionals. Health care professionals can exercise professional power individually or collectively based on the condition of service users. They gain such professional power from knowledge, training and education as well as from their interprofessional team and organisations.

Etzioni³² argues that organisations create, use and sustain power through management and use of professional knowledge. Etzioni³² asserts that 'the ultimate justification for a professional act is that it is, to the best of the professional's knowledge, the right act. This is relevant in the context of health care organisations and health care professionals. According to Etzioni³², professionals manage and control the context within the boundary of their knowledge and expertise. It is also important that health care professionals have to use their knowledge, power and authority within the boundary of organisational aims, objectives and strategies.

IV. THE MEDICAL PROFESSION

Drinka and Clark³³ mention that humanistic approach to medicine considers social and behavioural approaches to be as relevant as the biological whereas

the reductionist and scientific approaches believe in the rational solution of medical problems, dedication to competency in clinical practice and the standards of clinical science and disinterested concerns for the society and patient. Humanistic perspective is a more holistic approach towards the patient and emphasises social, personal and behavioural aspects of medical practice. The reductionist and scientific approaches discount personal, social and behavioural aspects of illness. According to Bloom³⁴, medical science struggles between two different philosophies – reductionist and scientific; and social and humanistic. Drinka and Clark³³ describe that by its nature scientific methods have had growing centrality in medical care. Ahnet al.³⁵ argue that the implementation of clinical medicine is systems oriented, therefore science of clinical medicine is fundamentally reductionist. However, Beresford³⁶ suggests that 'holism' as compared with 'reductionism' is the proper approach to medical science.

Even though medical professionals are put on top of the occupational hierarchy; they have experienced changes due to transformation of roles of nursing and allied health professionals³⁷. Gillespie et al.³⁷ further assert health care organisations are going through changes in organisational culture and these changes have helped medical professionals to strengthen their relationships with other health care professionals. Each group of health care professionals distanced themselves with other professional groups in clinical practices due to the specialisation and demand in health services. This may also be due to the increased cost of health services and pressures from regulatory bodies in health care market.

Freidson³⁸ asserts that even junior medical professionals use discretionary power in their clinical practice compared to other groups of health care professionals. This concept focuses on control and domination of a certain professional group and managing professionals at micro level. However, Freidson³⁸ did not examine if there are differences in using discretionary power between various specialties and sub specialties of medicines.

V. THE NURSING PROFESSION

Drinka and Clark³³ state that nurses follow the holistic approach to the patient and have less influence of reductionist approach compared to the medical profession. The holistic approach is a comprehensive patient care which is associated to an understanding of the hopes and priorities and physical, emotional, social, economic and spiritual needs of the person. Holistic nursing is the total nursing care practice that expresses this philosophy of care. Historically, nursing has been care related whereas medicine has been cure related by education, tradition and socialisation³⁹. Svensson⁴⁰ states that nurses role in the health care delivery system

is changing and they are now more questioning and can negotiate with doctors in decision making.

In the early days of nursing professionals, they used to come under the direct control and management of medical professionals⁴¹. After the establishment of separate councils for the registration of nursing and allied health professionals; these professionals gained a status of well recognised professions. They had to struggle decades to gain the full professional status. Moreover; with the specialisation, globalisation, advancement in science and technology, expansion of academic arena and training; other occupations such as pharmacy, nursing, optometry, radiography, physiotherapy and social care gained the status of a profession. The outcomes of these changes are mainly empowerment for these professionals and they gain more professional autonomy.

VI. THE ALLIED HEALTH PROFESSIONAL

As a registered, legal and established profession, each practitioner is required to follow his or her professional conduct and responsible for any professional advice to their service users⁴². Allied health professionals also need to work in a collaborative environment and need to maintain a cohesive relationship with medical and nursing professionals in order to establish their identity in health care and to achieve the desired outcome.

Over the last two decades expansion of roles of nursing and allied health professionals have developed in response to a complex mixture of pressures from a professional, social and political perspective⁴³. Expansion and development of health care professional roles and their support staff are therefore considered an important part of service development within the hospitals. As with any change it is essential that such role developments are carefully planned, managed, supported and evaluated²².

Most of the medical treatments take a reductionist approach to alleviate or cure symptoms or medical conditions and ignore holistic approach to balance the physical, emotional, personal and behavioural needs of service users. Since allied health care professionals represent a big number of health care professionals (excluding nursing, midwifery, medicine and dentistry), it is difficult to analyse the approach that different professions and specialties take. A balance approach between reductionist and holistic approaches is an appropriate solution for allied health care professionals as both approaches can be complementary to each other. Furthermore, Zakim⁴⁴ noted that holistic approaches could be as absurd in their complexity as reductionist in their simplicity.

VII. SUMMARY

The relationships and power dynamics between health care professionals have changed in the recent decades due to the emergence of various clinical specialties, technology and specialised knowledge. This may have contributed to changing boundaries between health care professionals. Furthermore, the changing scenario in health care cannot be separated from the wider transformations in the modern society. For example, changes in health care system may occur as a result of state intervention or development of stronger community, which is not discussed widely in the context of health care professionals. Hardy⁴⁵ asserts that medical knowledge is becoming increasingly deflated and the power of the medical profession is gradually decreasing as a result of rapid changes in the health care field. In his earlier work, Friedson^{46,47} did not mention medical professionals' role as a management or corporate function. Later, Friedson³⁸ argued that if medical professionals are considered as a part of corporate function in health care organisations, power of medical professionals has not been diminished.

Relative power is observed between health care professionals and in most interpersonal, interprofessional and inter-organisational relationships in health care. In health services, it means power that an individual professional or specialty has in relation to another professional or specialty.

The power and authority of health care professionals is not the same all the time. It depends on the assigned roles and the nature of the task that health care professionals need to perform. Moreover, the task specific roles may be influenced by the knowledge, skills and expertise of health care professionals. It is also determined by the nature of interprofessional working.

Health care organisation's policies have to reflect the emphasis upon role development and new ways of working. The modernisation agenda also focuses on a new division of labour with the introduction of new roles throughout the clinical professionals and new classes of multi skilled health care professionals. Hence, clinical work are now organised to enable health care professionals to exercise the full range of their skills, knowledge and expertise for the advantage of the service users.

Conflict of Interest: No

REFERENCES RÉFÉRENCES REFERENCIAS

1. Australian Commissions of Professions. Professions Australia (online). [cited 21 June 2020]. Available from: http://www.professions.com.au/define_profession.html
2. Johnson T. Professions and Power. London: Macmillan; 1972.

3. Hammick M. Freeth D. Copperman J. Goodsman D. Being Interprofessional. Cambridge: Polity; 2009.
4. Jackson JA. Professions and Professionalisation: Sociological Studies. Cambridge: Cambridge University Press; 2010.
5. Flexner A. Is Social Work A Profession?. USA: Cornell University; 1915.
6. Duncanis AJ. Golin AK. The Interdisciplinary Health Care Team: A Handbook. Maryland: Aspen Systems Corporation; 1979.
7. Larson MS. The Rise of Professionalism: A Sociological Analysis. California: University of California Press; 1977.
8. Becker B. The Nature of a Profession. Chicago: Chicago University Press; 1962.
9. Becker H. Sociological Work. Chicago: Aldine; 1970.
10. Millerson G. Dilemmas of Professionalism. New Society. 1964; 2: p.15-16.
11. Goode W. The Theoretical limits of Professionalization: The Semi Professions and Their Organizations, Teachers, Nurses and Social Workers. New York: Free Press; 1969.
12. Gargon JJ. Specifying Elements of Professionalism and the Process of Professionalisation. International Journal of Public Management. 1993; 16(12): p.1861-1884.
13. Goode WJ. Community within a Community: The Professions. American Sociological Review. 1957; 22:p.194-200.
14. Strauss AL. Fagerhaugh S. Susczek B. Weiner C. The Social Organisation of Medical Work. Chicago: University of Chicago Press; 1985.
15. Pointon JC. Perceptions of Profession and of being a Professional among Personnel/HRM Practitioners: A Phenomenographic Inquiry. Unpublished thesis for the degree of Doctor of Philosophy, Open University; 2009.
16. Durkheim E. Professional Ethics and Civic Morals. New York: Free Press; 1957.
17. Giddens A. Profiles and Critiques in Social Theory. Berkeley and LA: University of California Press; 1982.
18. Giddens A. The Constitution of Society: Outline of the Theory of Structuration. LA: University of California Press; 1984.
19. Schon DA. Educating the Reflective Practitioner: Towards a New Design for Teaching and Learning in the Professions. London: Jossey-Bass; 1987.
20. Schon DA. The Reflective Practitioner: How Professionals Think in Action. Aldershot: Avebury Academic Publishing; 1991.
21. Bryman A. Bell E. Business Research Methods. Oxford: Oxford University Press; 2011.
22. Rawson D. Models of Interprofessional Work: Likely Theories and Possibilities in Leathard A. (Ed.) Going Interprofessional – working together for health and welfare, East Essex: Brunner-Routledge; 1994.
23. Best S. Kellner D. Post-modern Theory: Critical Interrogation. London: Macmillan; 1991.
24. Macdonald K. The Sociology of the Professions. London: Sage; 1995.
25. Biggs S. Interprofessional Collaboration: Problems and Prospects, In: Ovretveit J. Mathias P. Thompson T, Interprofessional Working for Health and Social Care. Hampshire: Macmillan. 1997; p.186-200.
26. Baxter SK. Teamwork and interprofessional networks in stroke care: towards an understanding of joint working practice. Unpublished thesis for the degree of Doctor of Philosophy. Sheffield: University of Sheffield; 2007.
27. Beblin M. Beblin team roles. [cited 20 June 2020]. Available from: <http://www.belbin.com/rte.asp?id=8>.
28. Haire B. Interprofessional Care: A Model of Collaborative Practice. Charlottetown: PEI Health Sector Council; 2010. [cited 25 June 2020]. Available from: http://peihscc.ca/wp-content/uploads/IP_care.pdf.
29. Leggatt SG. Effective Healthcare Teams Require Effective Team Members: Defining Teamwork Competencies, BMC Health Service Research; 2007 7(17). [cited 15 June 2020]. Available from: <http://www.biomedcentral.com/1472-6963/7/17>.
30. Canning M. O' Dwyer B. Professional Accounting Bodies. Disciplinary Procedures: Accountable, Transparent and in the Public Interest? The European Accounting Review. 2001; 10(4): p.725-749.
31. Clegg S. Power, Rule and Domination: A Critical and Empirical Understanding of Power in Sociological Theory and Organizational Life. London: Routledge & Kegan Paul; 1975.
32. Etzioni A. Modern Organizations. New Jersey: Prentice-Hall; 1964.
33. Drinka TJK. Clark PG. Health Care Teamwork: Interdisciplinary Practice and Teaching. Connecticut: Auburn House; 2000.
34. Bloom SW. Socialisation for the Physician's Role: A review of some contributions of research to theory. In Shapiro EC. Lowenstein LM. (Eds.), Becoming a Physician: Development of Values and Attitudes in Medicines, Cambridge, MA: Ballinger; 1979.
35. Ahn AC. Tewari M. Poon CS. Phillips RS. The Limits of Reductionism in Medicine: Could Systems Biology Offer an Alternative?; 2006. [cited 20 August 2020]. Available from: <http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.0030208>.
36. Beresford MJ. Medical Reductionism: Lessons from the Great Philosophers. QJM - An International Journal of Medicine. 2010; 103(9):p.721-724.

37. Gillespie R. Florin D. Gillam S. Changing Relationships: Findings from the Patient Involvement Project. London: King's Fund; 2002.
38. Freidson E. Professionalism reborn: Theory, prophecy and policy. Cambridge: Polity Press; 1994.
39. Sullivan TJ. Collaboration: A Health Care Imperative. New York: McGraw-Hill; 1998.
40. Svensson R. The interplay between doctors and nurses – a negotiated order perspective. *Sociology of Health and Illness*. 1996; 18:p.379–398.
41. Fletcher IP. Power and Politics in Academy Land. Unpublished thesis submitted for the Professional Doctorate in Education. Bristol: University of the West of England; 2008.
42. Health Professional Council. Standards of Conduct, Performance and Ethics. London: HPC; 2008.
43. Humphries D. Masterton A. Developing New Clinical Roles. Churchill: Livingstone; 2000.
44. Zakim D. (2011) Reductionism in medical science and practice, *QJM - An International Journal of Medicine*. 2011; 104 (2): p.173 - 174.
45. Hardy M. Doctor in the House: the Internet as a source of lay health knowledge and the challenge to expertise. *Sociology of Health and Illness*.1999; 21(6):p.820–835.
46. Freidson E. Professional Dominance: The Social Structure of Medical Care. New York: Dodd, Mead and Co; 1970.
47. Freidson E. The Profession of Medicine: A Study of the Sociology of Applied Knowledge. New York: Dodd, Mead and Co; 1970.



Effect of Alcohol Disinfection on the Handle and Blade of Vegetables Knives by using ATP Inspection and Microbial Stamp Test

By Naomi Katayama, Akemi Ito, Mayumi Hirabayashi, Natuki Sasaki & Moe Inuzuka

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Abstract- To prevent food poisoning, we focused on kitchen vegetable knives, which are likely to cause secondary contamination, and conducted hygiene inspections to obtain results. The values after cooking and after washing, and after washing and after 70% spraying alcohol compared using the ATP wiping test and the microbial stamp test (selective medium: general bacteria, Escherichia coli, Staphylococcus aureus, Salmonella, Vibrio parahaemolyticus). As a result, the ATP test value decreased statistically significantly and became 100 or less after 70% alcohol sprayings. However, not all of the bacterial counts in the selective medium were statistically significantly different even after 70% alcohol sprayings. The reason the data was not clear due to 70% alcohol spray conditions. It may be advisable to perform a microbiological stamp test after applying 70% alcohol spray multiple times instead of once to a fully moistened knife handle and blade. In the future, we would like to consider the handling of more hygienic cooking utensils by further changing the 70% alcohol spraying conditions and conducting, Microbiological tests using a selective medium.

Keywords: ATP test, microbial stamp test, the handle of the knife, the blade of the knife, alcohol disinfection.

GJMR-K Classification: NLMC Code: QW 51



Strictly as per the compliance and regulations of:



Effect of Alcohol Disinfection on the Handle and Blade of Vegetables Knives by using ATP Inspection and Microbial Stamp Test

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I. INTRODUCTION

Cleaning and disinfecting cooking utensils, and cleaning and disinfecting hands, avoid the risk of food poisoning. Cleaning and disinfecting kitchen knives, which often come into contact with food, helps prevent secondary contamination. Many researchers have achieved hygiene management in hospitals and other kitchens through hygiene education^{1,2,3,4}. In particular, hygiene management using the ATP wiping test made it possible to create an easy-to-understand and hygienic environment by expressing invisible microorganisms as ATP values^{5,6,7,8}. In the past, we also reported the results of hygiene tests on kitchen utensils using ATP wiping test^{9,10,11}. Since it is impossible to know what kind of bacteria are present in the ATP wiping test, a more detailed hygiene test can obtain by examining food poisoning bacteria using a microbial selection medium. Therefore, in this study, we report the

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hygiene of the handle and blade of a vegetable knife by performing an ATP wiping test and a microbial stamp simultaneously after cooking, cleaning, and spraying alcohol.

II. MATERIALS AND METHODS

a) Hygiene tests on Kitchen knife

Hygiene tests on six vegetable knives performed using the ATP test kit (KIKKOMAN CO., Ltd.) and the microbial stamp test kit (NISSUI Co., Ltd.).

b) ATP wiping tests

ATP wiping tests performed on the handles and blades of 6 meat and fish knives. The ATP test was performed by the inspector three times immediately after cooking, after washing, and after 70% spraying alcohol. The inspector recorded the ATP test results.

c) Microbial stamp test

And the inspector performed a microbial stamp test as same as ATP tests (three times: after cooking, after washing, and after spraying alcohol). The microbial stamp was then cultured in an incubator at 38 degrees for three days. After culturing, microbial stamps were counted and recorded by the inspector.

d) Statistical processing

The results obtained compared using statistical methods. Compared data were subjected to an F test to determine whether to use a parametric test or nonparametric test. When there is no difference in the F test, the presence or absence of a significant difference was confirmed using the student t-test with or without a correspondence. If there was a difference in the F test, the presence or absence of a significant difference was confirmed using the Wilcoxon test with a pair or the Mann-Whitney test without correlation.

III. RESULTS

a) Vegetable knife: ATP results and microorganisms stamp test results of Alcohol disinfection

i. ATP test results of vegetable kitchen knife handle and blade

The ATP test values were lower on both the handle and blade of vegetable knives after washing than after cooking, and after spraying 70% alcohol than after

washing. After spraying alcohol, the ATP value of both the handle and blade of the knife was 100 or less. It was judged that the handle and blade of the vegetable knife were in a hygienic condition (See Table 1 and Table 2).

Table1. ATP test value and statistical processing result of Kitchen knife Handle

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	159550	4828	4828	59
2	2294	558	558	23
3	37952	6919	6919	8
4	12836	3691	3691	77
5	13009	4260	4260	28
6	2531	2813	2813	18
Average value	38028.7	3844.8	3844.8	35.5
SD	60934.6	2120.4	2120.4	26.6
F test	P=0.0001**		P=0.0001**	
Student-t*				
Wilcoxon	P=0.046*		P=0.028*	
F test			P=0.0001**	
Student-t*				
Wilcoxon			P=0.028*	

*Paired Student-t test * P<0.05, ** P<0.01

Table2. ATP test value and statistical processing result of Kitchen knife Blade

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	157036	163	163	45
2	183	1232	1232	21
3	4635	91	91	47
4	7962	58	58	7
5	382923	664	664	8
6	1102	529	529	15
Average value	92306.8	456.2	456.2	23.8
SD	155082.7	453.5	453.5	17.9
F test	P=0.0001**		P=0.0001**	
Student-t*				
Wilcoxon	P=0.075		P=0.028*	
F test			P=0.0001**	
Student-t*				
Wilcoxon			P=0.028*	

*Paired Student-t test * P<0.05, ** P<0.01

b) *Microbial stamp test results of vegetable kitchen knife handle and blade*

i. *General bacteria*

A microbial stamp test (general bacteria) performed on the handle and blade of a vegetable knife. The results are shown in Tables 3 and 4. Bacterial

counts decreased after washing than after cooking and after 70%alcohol sprayings than after washing, not all were statistically significant. The number of microorganisms after spraying with 70%alcohol was not sufficiently reduced as compared with that after washing.

Table 3 Number of general bacteria on Kitchen knife Handle and statistical processing result

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	22	14	14	3
2	35	18	18	15
3	41	20	20	20
4	10	1	1	3
5	70	3	3	2
6	20	3	3	0
Average value	33.0	9.8	9.8	7.2
SD	21.2	8.5	8.5	8.2
F test	P=0.021*		P=0.473	
Student-t*			P=0.206	
Wilcoxon	P=0.028*			
F test			P=0.018*	
Student-t*				
Wilcoxon			P=0.028*	

*Paired Student-t test * P<0.05, ** P<0.01

Table 4 Number of general bacteria on Kitchen knife Blade and statistical processing result

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	49	1	1	4
2	0	13	13	26
3	8	17	17	2
4	41	59	59	0
5	198	48	48	21
6	0	44	44	0
Average value	49.3	30.3	30.3	8.8
SD	75.8	23.1	23.1	11.6
F test	P=0.021*		P=0.473	
Student-t*			P=0.206	
Wilcoxon	P=0.028*			
F test			P=0.0001**	
Student-t*				
Wilcoxon			P=0.138	

*Paired Student-t test * P<0.05, ** P<0.01

ii. *Escherichia Coli (E Coli)*

The number of E. coli performed on the handle and blade of a vegetable knife. The results shown in Tables 5 and 6. Bacterial counts decreased after washing than after cooking and after 70%alcohol

sprays than after washing, not all were statistically significant. The number of microorganisms on the handle of the kitchen vegetable knife did not decrease statistically significantly.

Table 5 Number of E. coli on Kitchen knife Handle and statistical processing result

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	8	14	14	3
2	1	3	3	0
3	34	0	0	11
4	1	0	0	0
5	0	1	1	0
6	0	0	0	0
Average value	7.3	3.0	3.0	2.3
SD	13.4	5.5	5.5	4.4
F test	P=0.024*		P=0.301	
Student-t*			P=0.826	
Wilcoxon	P=0.787			
F test			P=0.008**	
Student-t*				
Wilcoxon			P=0.068	

*Paired Student-t test * P<0.05, ** P<0.01

Table 6 Number of E. coli on Kitchen knife Blade and statistical processing result

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	35	0	0	4
2	2	21	21	2
3	66	78	78	0
4	4	1	1	0
5	55	3	3	1
6	1	1	1	0
Average value	27.2	17.3	17.3	1.2
SD	29.0	30.8	30.8	1.6
F test	P=0.444		P=0.0001**	
Student-t*	P=426			
Wilcoxon			P=0.173	
F test			P=0.0001**	
Student-t*				
Wilcoxon			P=0.043*	

*Paired Student-t test * P<0.05, ** P<0.01

iii. *Staphylococcus aureus*

Tables 7 and 8 show the results for Staphylococcus aureus. There was no statistically significant difference between the knife blade after cooking and after cleaning and after cleaning and after 70% spraying alcohol. However, the number of bacteria is decreasing. The number of bacteria on the

handle of the kitchen vegetable knife is statistically significantly reduces after washing and after spraying with 70%alcohol.

Table 7 Number of Staphylococcus aureus on Kitchen knife Handle and statistical processing result

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	65	42	42	0
2	70	12	12	0
3	6	64	64	3
4	1	3	3	0
5	9	1	1	0
6	70	2	2	0
Average value	36.8	20.7	20.7	0.5
SD	34.6	26.3	26.3	1.2
F test	P=0.259		P=0.0001**	
Student-t*	P=0.425			
Wilcoxon			P=0.028	
F test			P=0.0001**	
Student-t*				
Wilcoxon			P=0.028*	

*Paired Student-t test * P<0.05, ** P<0.01

Table 8 Number of Staphylococcus aureus on Kitchen knife Blade and statistical processing result

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	40	39	39	0
2	17	3	3	11
3	3	15	15	0
4	1	3	3	0
5	45	0	0	6
6	1	6	6	52
Average value	17.8	11.0	11.0	11.5
SD	20.1	14.7	14.7	20.3
F test	P=0.231		P=0.223	
Student-t*	P=0.453		P=0.957	
Wilcoxon				
F test			P=0.488	
Student-t*			P=0.660	
Wilcoxon				

*Paired Student-t test * P<0.05, ** P<0.01

iv. *Salmonella*

The results of Salmonella shown in Tables 9 and 10. The number of bacteria decreased after washing than after cooking and after spraying 70% alcohol than after washing. However, the number of Salmonella was

not statistically significantly reduced in the handle of the kitchen vegetable knife. With the knife blade, the number of Salmonella bacteria after 70% alcohol spraying was statistically significantly lower than that after cooking.

Table 9 Number of Salmonella on Kitchen knife Handle and statistical processing result

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	9	0	0	4
2	1	0	0	0
3	1	0	0	0
4	0	0	0	0
5	0	3	3	0
6	0	0	0	0
Average value	1.8	0.5	0.5	0.7
SD	3.5	1.2	1.2	1.6
F test	P=0.010*		P=0.251	
Student-t*			P=0.862	
Wilcoxon	P=0.465			
F test			P=0.041*	
Student-t*				
Wilcoxon			P=0.109	

*Paired Student-t test * P<0.05, ** P<0.01

Table 10 Number of Salmonella on Kitchen knife Blade. and statistical processing result

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	35	94	94	0
2	1	0	0	0
3	1	0	0	0
4	5	0	0	0
5	130	1	1	1
6	1	0	0	0
Average value	28.8	15.8	15.8	0.2
SD	51.3	38.3	38.3	0.4
F test	P=0.247		P=0.0001**	
Student-t*	P=0.629			
Wilcoxon	P=3.17			
F test	P=0.0001**			
Student-t*	P=0.028*			
Wilcoxon	P=0.028*			

*Paired Student-t test * P<0.05, ** P<0.01

v. *Vibrio parahaemolyticus*

The results of *Vibrio parahaemolyticus* shown in Tables 11 and 12. The number of bacteria decreased

after washing than after cooking and after spraying 70%alcohol than after washing, but there was no statistically significant difference.

Table 11 Number of *Vibrio parahaemolyticus* on Kitchen knife Handle and statistical processing result

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	1	0	0	0
2	71	0	0	1
3	28	22	22	3
4	1	0	0	2
5	0	3	3	7
6	0	0	0	0
Average value	16.8	4.2	4.2	2.2
SD	28.7	8.8	8.8	2.6
F test	P=0.006**		P=0.005**	
Student-t*	P=0.225			
Wilcoxon	P=0.715			
F test	P=0.0001**			
Student-t*	P=0.418			
Wilcoxon	P=0.418			

*Paired Student-t test * P<0.05, ** P<0.01

Table 12 Number of *Vibrio parahaemolyticus* on Kitchen knife Blade and statistical processing result

For vegetables	No alcohol treatment		Alcohol treatment	
	Before washing	After washing	After washing	After alcohol
1	0	0	0	1
2	0	3	3	0
3	0	0	0	0
4	1	0	0	0
5	40	3	3	0
6	0	2	2	0
Average value	6.8	1.3	1.3	0.2
SD	16.3	1.5	1.5	0.4
F test	P=0.001**		P=0.003**	
Student-t*	P=1.000			
Wilcoxon	P=0.144			
F test	P=0.0001**			
Student-t*	P=0.423			
Wilcoxon	P=0.423			

*Paired Student-t test * P<0.05, ** P<0.01

IV. DISCUSSION

This time, the ATP value became 100 or less after spraying 70%alcohol, and the handle and blade of the knife became hygienic. However, the results of the microbial stamp test using the selective medium showed that the number of bacteria did not decrease sufficiently even after spraying with 70%alcohol. The bactericidal effect of alcohol spray differed depending

on the type of bacteria. After cleaning, wipe off the water sufficiently and spray 70%alcohol, and we think it is better to spray 70%alcohol multiple times instead of once. In the future, we would like to count the number of microorganisms by sterilizing by increasing the number of 70%alcohol sprays.

V. CONCLUSIONS

ATP test and microbial stamp test (selective medium: general bacteria, *Escherichia coli*, *Staphylococcus aureus*, *Salmonella*, *Vibrio parahaemolyticus*) on the handle and blade of vegetable knives for the use of hygienic cooking utensils in the kitchen went. As a result, the ATP value after washing after cooking and after spraying 70% alcohol was statistically significantly lower than after washing. However, although each bacterium in the selective medium decreased, not all of them were statistically significant. In the future, after cooking, we would like to wipe off the water from the kitchen vegetable knife and then spray 70% alcohol, and then spray 70% alcohol multiple times instead of once before conducting a microbiological test.

ACKNOWLEDGMENTS

We would like to thank all the cooks who participated in this experiment. Also, we would like to thank the inspectors who also performed the ATP inspection.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Aycieck H, Oquz U, Karci K. Comparison of results of ATP bioluminescence and traditional hygiene swabbing methods from the determination of surface cleanliness at a hospital kitchen. (2006). *Int J Hyg Environ Health*. 209(2): 203-206.
2. Osimani A, Garofalo C, Clementi F, Tavoletti S, Aquilanti L. Bioluminescence ATP monitoring for the routine assessment of food contact surface cleanliness in a university canteen. (2014). *Int J Environ Res Public Health* 17; 11(10): 10824-10837.
3. Lee JH (2018) An investigation of Factors that influence Hygiene Practices at a small Day Care Center. (2018). *J Food Prot*. 81(1): 158-164.
4. Griffith CJ, Cooper RA, Gilmore J, Davies C, Lewis M. An evaluation of hospital cleaning regimes and standards. (2000) *J Hosp Infect*. 45(1): 19-28
5. Stannard CJ, Gibbs PA. Rapid microbiology: applications of bioluminescence in the food industry—a review. (1986) *J Biolumin Chemilumin* 1(1): 3-10.
6. Nante N, Ceriale E, Messina G, Lenzi D, Manzi P. Effectiveness of ATP bioluminescence to assess hospital cleaning: a review. (2017) *J Prev. Med. Hyg*. 58(2): E177-E183.
7. Amodio E, Dubi C. Use of ATP bioluminescence for assessing the cleanliness of hospital surfaces: a review of the published literature (1990-2012). (2014) *J Infect Public Health* 7(2): 92-98
8. Stanley PE. A review of bioluminescent STP techniques in rapid microbiology. (1989) *J Biolumin Chemilumin* 4(1): 375-380
9. Katayama N, Ito A, Hirabayashi M, Kondo S, Nakayama Y, Naka A, Sasaki N, Inuzuka M, Tamura T. Results of Hygiene Education of Kitchen Knife by using ATP Inspection – Comparison of Handle and blade. (2020) *Global Journal of Medical Research*. 20(5):1-6.
10. Katayama N, Hirabayashi M, Ito A, Kondo S, Nakayama Y, Naka A, Sasaki N, Inuzuka M, Tamura T. Results of Hygiene Education of Kitchen Cutting Board by using ATP Inspection – Comparison of Vegetable Cutting Board and Meat Cutting Board. (2020) *Global Journal of Medical Research*. 20(5):13-16.
11. Katayama N, Kondo S, Ito A, Hirabayashi M, Nakayama Y, Naka A, Sasaki N, Inuzuka M, Tamura T. Results of Hygiene Education of Kitchen Stove Knob and Water Faucet by using ATP Inspection. (2020) *Global Journal of Medical Research*. 20(5):35-38.



GLOBAL JOURNAL OF MEDICAL RESEARCH: K
INTERDISCIPLINARY
Volume 20 Issue 12 Version 1.0 Year 2020
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Worker's Distribution Model: A Remedy for Global Economic Crisis by the Continuation of Work during Pandemic

By Sah MK

Abstract- Introduction: Since the WHO declared COVID-19 as a global pandemic, nearly 80% of the global population has come under stay-home orders, lockdowns, and quarantines, inflicting increasingly severe direct and indirect economic impacts. Transmission of SARS-CoV-2 can occur through direct, indirect, or close-contact. The duration of RT-PCR positivity ranges from 1-3 weeks or more in some cases. The number of COVID-19 infections may be attributable to the late identification of sources-of-infection and the ability of the host to shed the infection while asymptomatic. The COVID-19 pandemic is wreaking havoc on the global economy, unleashing the worst economic downturn since the great depression. Managing the human resource in such a situation, keeping most of the workforce in quarantine is challenging.

The idea of the Worker's Distribution Model (WDM) of management is innovated. There is a global economic crisis during this pandemic. This WDM is justifiable to sustain the economic crisis of the country and stands aside to raise the economy of a country or community.

Keywords: pandemic, COVID-19, quarantine, epidemic, economic-crisis, worker's distribution model, transmission, human resource.

GJMR-K Classification: NLMC Code: W 84



WORKERS DISTRIBUTION MODEL: A REMEDY FOR GLOBAL ECONOMIC CRISIS BY THE CONTINUATION OF WORK DURING PANDEMIC

Strictly as per the compliance and regulations of:



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The idea of the Worker's Distribution Model (WDM) of management is innovated. There is a global economic crisis during this pandemic. This WDM is justifiable to sustain the economic crisis of the country and stands aside to raise the economy of a country or community. This model of management of human resources in the pandemic situation may decrease the transmission of the disease. This WDM will be very effective in saving workforce, reducing the chance of infection, and to the continuation of an organization. Thus the aim of writing this opinion is to introduce with WDM model for worker's distribution during the pandemic situations to reduce transmission and improve economic crisis by the continuation of an organization.

Conclusion: The cyclic WDM has a scientific basis of quarantine, thus helpful in reducing disease transmission during the pandemic. This model is also helpful in mitigating the global economic crisis and the continuation of any organization during the pandemic.

Keywords: pandemic, COVID-19, quarantine, epidemic, economic-crisis, worker's distribution model, transmission, human resource.

I. INTRODUCTION

In early January 2020, a novel coronavirus (2019-nCoV) was identified as the infectious agent causing an outbreak of viral pneumonia in Wuhan, China, where the first cases had their symptom onset in December 2019 (Backer, Klinkenberg, and Wallinga 2020). Now, COVID-19 with symptoms like fever, dry

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cough, shortness of breath, and breathing difficulties, tiredness has spread at a lightning speed to affect several countries (Hamouche 2020; Bi et al. 2020). COVID 19 is spreading worldwide. According to the World Health Organization, until August 19, 2020, more than 216 countries and territories are affected by this disease, and 21.9 million cases of COVID-19 are confirmed. Nearly one Million deaths are recorded, until now (WHO 2020). Since the World Health Organization declared COVID-19 as a global pandemic, nearly 80 percent of the global population has come under stay-home orders, lockdowns, and quarantines, inflicting increasingly severe direct and indirect economic impacts (United Nations 2020).

Due to the COVID threat, the international institutions, governments of countries, and various organizations are forced to use unprecedented restrictive measures in many spheres of activity. As a result, the economies of the countries worldwide are significantly affected and are on the verge of crisis (Danylyshyn 2020).

As with public health overall, several changes in the practice of communicable disease control can be anticipated due to the health care delivery system's transition from a predominantly fee-for-service system to a predominantly managed care system (Rutherford 1998). Transmission of SARS-CoV-2 can occur through direct, indirect, or close contact with infected people through infected secretions such as saliva and respiratory secretions or their respiratory droplets, which are expelled when an infected person coughs, sneezes, talks, or sings (Scientific Brief 2020). The evidence suggests that SARS-CoV-2 RNA can be detected in people 1-3 days before their symptom onset, with the highest viral loads, measured by RT-PCR, observed around the day of symptom onset, followed by a gradual decline over time. The duration of RT-PCR positivity generally appears to be 1- 2 weeks for asymptomatic persons, and up to 3 weeks or more for patients with mild to moderate disease. In patients with severe COVID-19 disease, it can be much longer (Scientific Brief 2020). The number of COVID-19 infections may be attributable to the late identification of sources-of infection and the ability of the host to shed the infection

while asymptomatic. The transmission may occur during the incubation period (Huang et al. 2020).

SARS (severe acute respiratory syndrome) was notable because infectiousness increased around 7–10 days after symptom onset. Onward transmission can be substantially reduced by containment measures such as isolation and quarantine (He et al. 2020).

During epidemic or pandemic situations, though the other sectors which are related to the basic need of people are important, the most concerned sector is the health and thus to save the lives healthcare services must function appropriately. And to run the health sector as well as other sectors, the human resource must be managed so that there will be no shortage of workforce. In most of the countries, the lack of proper health workforce planning has resulted in imbalances that threaten the capacity of healthcare systems to attain their objectives and due to which people cannot get proper health facilities. This issues has directed attention towards the prospect of developing healthcare systems that are more

responsive to the needs and expectations of the population by providing health planners with a systematic method to effectively manage human resources in this sector (Al-Sawai and Al-Shishtawy 2015) even in the situation like epidemic and pandemic. In contrast to effective workforce planning, imbalances in the health workforce represent a challenge for health policymakers, and hinder effective planning. Imbalances between available inputs and requirements characterize health systems in developed and developing countries (Dal Poz et al. 2010). A Human Resource for Health (HRH) Action Framework was formulated by the WHO and partners to achieve better health outcomes using improved health workforce. This framework has shown to be effective in planning in normal as well as an abnormal situation or from a higher level (Ministry or Policymaking Department) to ground level of working area (healthcare centers) and thus a proper human resource can be managed even in crisis (Dal Poz et al. 2010).

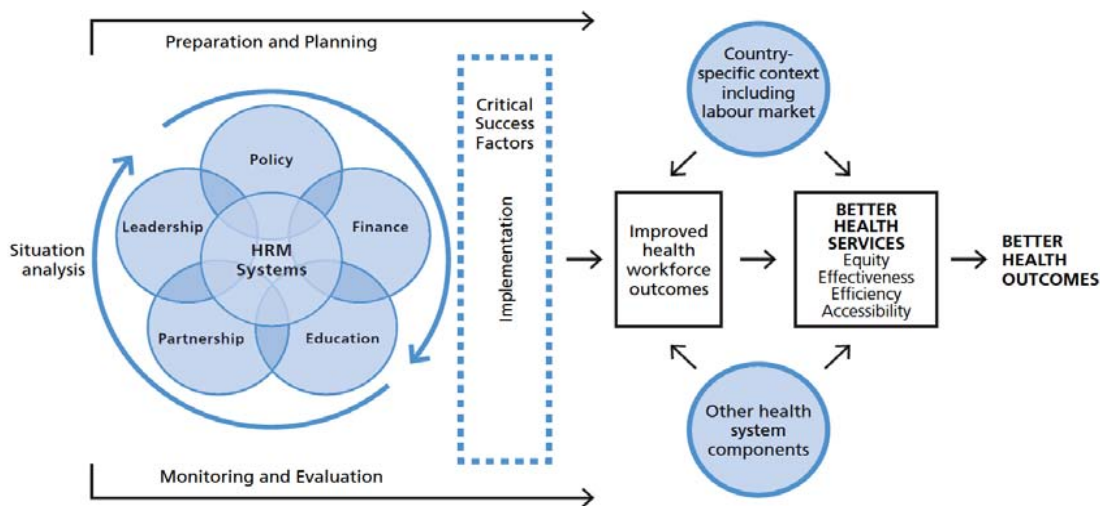


Diagram 1: HRH Action Frame Work. (Dal Poz et al. 2010)

In the COVID-19 pandemic, the health person or any other staffs of other organizations which are in direct contact with suspected or confirmed case of COVID-19 is generally quarantined or isolated. The same is true for other pandemic or epidemic diseases. As many cases should be isolated or quarantined, there is a challenge to meet the demand of health personnel in such scenarios, including COVID-19. If the health personnel working in close contact with a suspected, probable, or confirmed case of epidemic or pandemic disease, then there is possibilities of transmitting the disease to others. So they must be quarantined or isolated. Further, it is impossible to repeat test every day or every week to the health worker/staff of an organization. So that managing the human resource in such a situation, keeping most of the worker/staff quarantine is challenging.

The idea of the Worker's Distribution Model (WDM) of management is innovated. This model of management of workers is scientific and may be useful in a situation of pandemic/epidemic. This model of human resource management in the pandemic situation may decrease the transmission of the disease and help in raising the global economy. Thus the aim of writing this opinion is to introduce with WDM model for worker's distribution during the pandemic situations to reduce transmission and improve the economic crisis by the continuation of an organization.

II. PROPOSED INNOVATIVE IDEA

The group of human resources can be managed if their duty is assigned cyclically in such a way that they will have time to be quarantined as long as the average disease period with possible disease

transmission ability of a disease (epidemic/pandemic). At the same time another group will be able to work in the organization providing health services or services in the other fields (industries, civil service offices, schools and colleges). Generally, human resources (HR) should be divided into three groups and they must work cyclically for a time period. The following formulae are being proposed and will be useful to reduce transmission of disease and ultimately very helpful for continuous running of the organization and minimizing the possible economic crisis during the epidemic/pandemic, including the COVID-19 pandemic.

III. ASSUMPTION

1. Number of the days of average disease period with possible disease transmission ability of a disease (epidemic/pandemic) in an infected person is always taken as a multiple of 2 unit (X), so this value is considered as constant (C_1) = 2
(Example: If for COVID-19 pandemic, the average disease period with possible disease transmission ability is 14 days then, X = 7 days as C_1 is 2, if it is considered 20 days, then X is 10 days as C_1 is 2)
2. The number of groups of workers required in WDM is always the same, so this is considered as another constant (C_2) = 3

3. Total number of staffs/workers of service providing organization or section of an organization: N

Calculations and some basic formulae:

1. Calculation of number of Human resources in each group of the WDM
Number of staffs in each group: $n = N/C_2$
2. Calculation of the number of days of a complete cycle of the WDM
Number of days of a complete cycle: $d = X(C_1 + 1)$
3. Calculation of the number of days to work in a cycle of the WDM
Number of days to work by a group of the WDM; $D_n = X$ days at a time
4. Calculation of the number of the group that will be at home quarantine in the WDM
Number of groups that will be at home quarantine at the working time of another group during a cycle of the WDM = $C_2 - 1 = 2$
5. Calculation of duration of quarantine
Duration of home quarantine (not in work): Average disease period with possible disease transmission ability of a disease (epidemic/pandemic) in an infected person = $C_1 X$
6. Calculation of the number of groups that will work
The number of groups that will work (g) = $C_1 - 1$

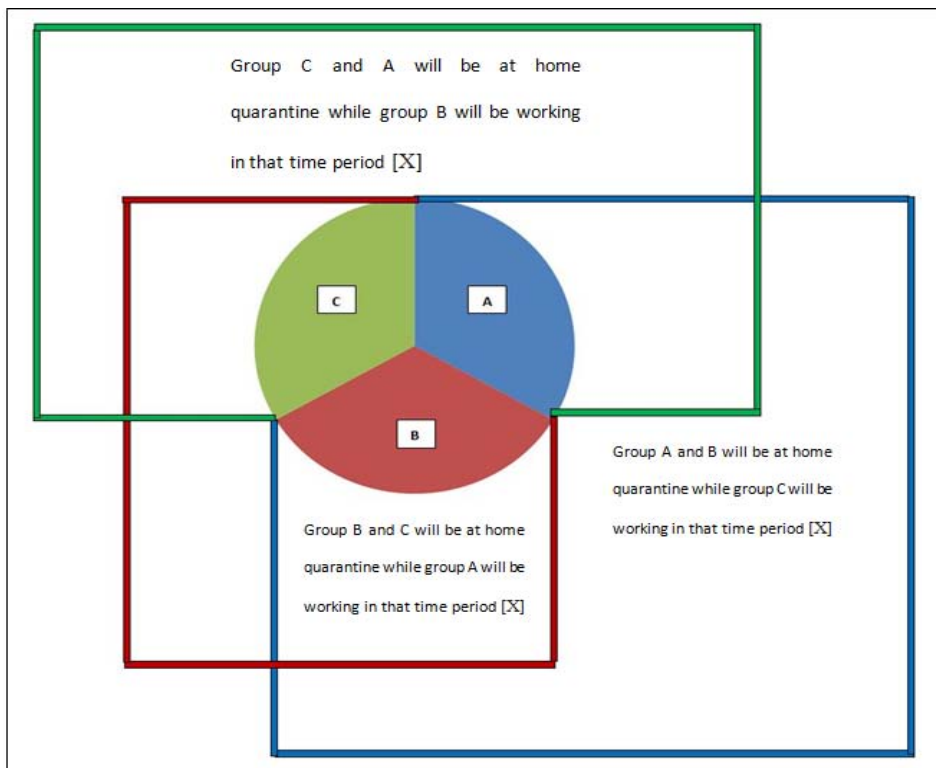


Diagram 2: This diagram shows the method of group formation that is distributed for work so that each group will have time to be home quarantined for the duration of the average disease period with possible disease transmission ability of particular communicable disease. Due to such distribution of manpower, there will be less chance of infection transmission from any worker to other workers or health workers to the patient. Persons in a group must divide their working hours with alternate 12 hours duty in a day if the organization provides 24-hour services. No need of shift duty if an organization provides a single shift in a day.

IV. DISCUSSION

According to Hamouche S et al; coronavirus is a new virus that has been discovered with its outbreak in Wuhan, China, in December 2019. Now, it has spread at a lightning speed to affect several countries (Hamouche 2020). Due to the spread of this virus, almost all countries of the world face difficulties not only due to loss of life but also due to the economic crisis. Many industries are not running now. There is a scarcity of resources and products as well. World Health Organization report shows, till August 19, 2020, more than 216 countries, and territories are affected by this disease and 21.9 million cases of COVID-19 are confirmed. Nearly a Million deaths are recorded until now (WHO 2020). Vaccines are still in the trial phase, so it will take time to come in the market. So there are possibilities of further loss of life and down following the economy worldwide. According to the scientific brief of WHO, the duration of RT-PCR positivity generally appears to be 1- 2 weeks for asymptomatic persons, and up to 3 weeks or more for patients with mild to moderate disease. In patients with severe COVID-19, it can be much longer (Scientific Brief 2020). According to Huang L et al.; the number of COVID-19 infections may be attributable to the late identification of sources of infection and the ability of the host to shed the infection while asymptomatic. (Huang et al. 2020).

So that, it can be believed that the communicable disease when it develops the potential to spread/transmit to a large number of the population, then it becomes a burden to the community/country as shown by COVID 19 pandemic, the same is for epidemic but limited geographical regions. In such situations, there may be a down flow of the economy, shortage of workforce to work, and health services due to inadequate health personnel because they may be infected if not managed. Further, those service providers who work in a group or directly with the contact of other people or provides services to a patient at that time, the possibilities of transmission of the disease is markedly increasing so that pathetic situation may develop. According to the June 2020 global Economic prospectus of The World Bank, the baseline forecast envisions a 5.2 percent contraction in global GDP in 2020. This prediction using market exchange rate weight shows the deepest global recession in decades, despite the extraordinary efforts of governments to counter the downturn with fiscal and monetary policy support (World Bank Group 2020). According to reports of the World Bank, every region is subject to substantial growth downgrades. East Asia and the Pacific will grow by a scant 0.5%. South Asia will contract by 2.7%, Sub-Saharan Africa by 2.8%, Middle East and North Africa by 4.2%, Europe and Central Asia by 4.7%, and Latin America by 7.2% (The World Bank 2020). To reduce

such unfortunate situations we must divide the working staffs so that there is less chance of disease transmission and continuation of work can be enforced. In this proposed model of the Workers Distribution Model (WDM), the working staff will get time to be quarantined at home for the duration of possibilities of disease transmission (average disease period with possible disease transmission ability of disease, epidemic, or pandemic, in an infected person). This model should be followed at least in hospitals and such service-areas where it is compulsory to provide daily services, still it can be applied to other service sectors also including industries, schools/colleges, and other sectors, which are the basis to raise the economy of the country directly or indirectly. This will markedly reduce the chances of disease transmission and the shortage of workforce. Ultimately there would be a little chance of economic crisis of a country.

The pandemic puts as many as 160 million jobs in tourism, manufacturing, and commodity sectors in developing countries at risk, potentially threatening economic growth and decent jobs as envisaged in SDG-8 (United Nations 2020). But with the help of the WDM, there is no need for terminating the staff as many companies have done even the hospitals are doing so because of the decreased income of an organization. In this model, among workers at a home quarantine, an investigation is required only for those who develop signs and symptoms. So this will reduce the unnecessary burden of investigations also and can save lots of money in the economic crisis and the crisis of medical resources.

In this WDM, the whole workers of a section or organizations are divided into; "n" numbers (groups). If C_1 is a constant having value 2 and X is the unit, twice of which is the average disease period with possible disease transmission ability of a disease (epidemic/pandemic) in an infected person and G is the number of group of workers required, then C_1-1 group will work while C_2-1 group will be at home quarantine for the same period. Since this is a cyclic model, each group will get a chance to be home quarantined for average disease period with possible disease transmission ability. Thus, this model has a scientific basis for the prevention of disease transmission and controlling the bad situations in epidemic or pandemic. If any organization provides 24-hour services like a hospital, a shift duty of 12 hours among the members of a group should be managed.

a) *The benefit of the Worker's Distribution Model*

The Worker's Distribution Model is effective in an abnormal situation when there is a burden of infective disease in a community (Epidemic or Pandemic). Because there is the proper time of quarantine (average disease period with possible disease transmission

ability of a disease) for the working staffs, who are believed to be the suspected case during working days of the cycle of the WDM. It also reduces the chances of transmission of disease among the normal people (general public or working staffs) from suspected or probable cases among the people or staffs, mostly during the working hour in epidemic and pandemic situations. There is no need to stop any organizations if we follow the WDM. So the services will continue for the public, and patient and productivity of the industry will be adequate, almost the same as previously. This model does not require additional workforce; rather, they will have to work half of the time of certain days (X) but alternatively with 12-hour duty in a day. This WDM is justifiable to sustain the economic crisis of the country and stands aside to raise the economy of a country or community during a crisis that develops due to situations like epidemic/pandemic diseases. Currently, the COVID-19 pandemic has reduced the global economy, and there is a global economic crisis as well as in the individual country. This model is also applicable to staff, teachers, and students of schools and colleges. So that there will be less chance of infection transmission, with this model, school and college can also be continued in such a situation besides hospitals, civil service offices, and industries.

b) *Limitation of Worker's Distribution Model*

There must be a minimum of 3 members is a section of a company to follow this model. Staff less than 3 in a section cannot be distributed in the groups to complete the cycle and that prevent continuous work for certain days (X). This model can reduce the chance of infection at maximum and does not prevent transmission completely.

V. CONCLUSION

The Worker's Distribution Model (WDM) is effective in an abnormal situation when there is a burden of infective disease in a community (Epidemic or Pandemic). This WDM is justifiable to sustain the economic crisis of the country and stands aside to raise the economy of a country or community during a crisis that develops due to the epidemic or pandemic disease-related situations like the COVID-19 pandemic. This model can be applied in hospitals, social service sectors, school/colleges, and industries. This WDM will be very effective in saving workforce, reducing the chance of infection. There is no need to stop any organizations completely if organizations follow WDM. This cyclic WDM has a scientific basis of quarantine for the average disease period with possible disease transmission ability of a disease (epidemic or pandemic).

Abbreviation

COVID-19: Corona Virus Disease of 2019
 GDP: Gross Domestic Product
 HR: Human Resource
 nCoV: Novel Corona Virus
 RT-PCR: Reverse Transcription Polymerase Chain Reaction
 SARS-CoV-2: Severe Acute Respiratory Syndrome Coronavirus type 2
 SDG: Sustainable Development Goals
 WDM: Worker's Distribution Model
 WHO: World Health Organization

Declaration

Ethical approval and consent to participate

NA

Consent for publication

NA

Availability of data and materials

NA

Competing interests

There are no competing interests.

Funding

None

REFERENCES

1. Al-Sawai, A. and Al-Shishtawy, M.M. 2015. "Health Workforce Planning." *SQU Medical Journal*, 15(1): 27–33.
2. Backer, J. A., Klinkenberg, D., and Wallinga, J. 2020. "Incubation Period of 2019 Novel Coronavirus (2019-nCoV) Infections among Travellers from Wuhan, China, 20 28 January 2020." *Eurosurveillance* 25 (5): 1–6. doi:10.2807/1560-7917.ES.2020.25.5.2000062.
3. Bi, Q., Wu, Y., Mei, S., Ye, C., Zou, X., Zhang, Z., Liu, X., et al. 2020. "Epidemiology and Transmission of COVID-19 in 391 Cases and 1286 of Their Close Contacts in Shenzhen, China: A Retrospective Cohort Study." *The Lancet Infectious Diseases* 3099 (20): 1–9. doi:10.1016/S1473-3099(20)30287-5.
4. Dal Poz, M. R., Dreesch, N., Fletcher, S., Gedik, G., Gupta, N., Hornby, P., and Schofield, D. 2010. "Models and Tools for Health Workforce Planning and Projections." *Human Resources for Health Observer*, no. 3: 1–19.
5. Danylyshyn, B. 2020. "The Peculiarities of Economic Crisis due to COVID-19 Pandemic in a Developing Country: Case of Ukraine." *Problems and Perspectives in Management* 18 (2): 13–22. doi:10.21511/ppm.18(2).2020.02.
6. Hamouche, S. 2020. "COVID-19 and Employees' Mental Health: Stressors, Moderators and Agenda

for Organizational Actions.” Emerald Open Research 2: 15. doi:10.35241/emeraldopenres.13550.1.

7. He, X., Lau, E. H. Y., Wu, P., Deng, X., Wang, J., Hao, X., Lau, Y.C., et al. 2020. “Temporal Dynamics in Viral Shedding and Transmissibility of COVID-19.” Nature Medicine 26 (5): 672–75. doi:10.1038/s41591-020-0869-5.
8. Huang, L, Zhang, X., Zhang, Xi, Wei, Z., Zhang, L., Xu, J, Liang, P., Xu, Y., Zhang, C., and Xu, A. 2020. “Rapid Asymptomatic Transmission of COVID-19 during the Incubation Period Demonstrating Strong Infectivity in a Cluster of Youngsters Aged 16-23 Years Outside Wuhan and Characteristics of Young Patients with COVID-19: A Prospective Contact-Tracing Study.” Journal of Infection 80 (6). Elsevier Ltd: e1–13. doi:10.1016/j.jinf.2020.03.006.
9. Rutherford, G. W. 1998. “Public Health, Communicable Diseases, and Managed Care: Will Managed Care Improve or Weaken Communicable Disease Control?” American Journal of Preventive Medicine 14 (3S.): 53–59. doi:10.1016/S0749-3797(97)00039-1.
10. Scientific Brief, World Health Organization. 2020. “Transmission of SARS-CoV-2: Implications for Infection Prevention Precautions” 19: 1–18. Available from <https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions>. Accessed on August 21, 2020.
11. The World Bank. 2020. “The Global Economic Outlook During the COVID-19 Pandemic: A Changed World.” The World Bank. Available from: <https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world>. Accessed on August 21, 2020.
12. United Nations, Social Affairs, Economic Analysis, and Policy Division. 2020. “Monthly Briefing,” no. 137: 1–6. Available from: <http://www.bit.ly/wespbrief>. Accessed on August 21, 2020.
13. WHO. 2020. “Brazil: WHO Coronavirus Disease (COVID-19) Dashboard” Available from: <https://covid19.who.int>. Accessed on August 19, 2020.
14. World Bank Group. 2020. Global Economic Prospects, June 2020. doi: 10.1596/978-1-4648-1553-9.



GLOBAL JOURNAL OF MEDICAL RESEARCH: K
INTERDISCIPLINARY
Volume 20 Issue 12 Version 1.0 Year 2020
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

A Study to Assess the Knowledge and Attitude of Family Members towards Ill-Effects of Alcoholism at Selected Hospital, Amritsar, Punjab

By Dr. Amandeep Kaur Bajwa & Ms. Amanpreet Kaur

Abstract- Introduction: Alcoholism is one of the major health problems in the country and world over. It is the family problem and the most devastating impact occurs when the abuser is a parent. It affects the family members with the same intensity with which it affects the dependent person. The family as a unit would have to be assessed to delineate its strength and weakness in order to meet their well being. Therefore researcher feels the need to assess the level of knowledge and attitude of family members towards ill effects of alcoholism. The Objectives of the study were to assess the knowledge and attitude of family members towards ill effects of alcoholism, to find out association with selected demographic variables such as age, gender, educational status, habitat, monthly income, type of family, relationship with alcoholic and history of alcoholism in family on knowledge and attitude regarding ill effects of alcoholism and to find out relationship between knowledge and attitude score.

Keywords: knowledge, attitude, family members, ill-effects, alcoholism.

GJMR-K Classification: NLMC Code: WS 462



Strictly as per the compliance and regulations of:



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A Study to Assess the Knowledge and Attitude of Family Members towards Ill-Effects of Alcoholism at Selected Hospital, Amritsar, Punjab

To Assess the Knowledge and Attitude of Family Members towards Ill-Effects of Alcoholism

Dr. Amandeep Kaur Bajwa^α & Ms. Amanpreet Kaur^σ

Abstract- Introduction: Alcoholism is one of the major health problems in the country and world over. It is the family problem and the most devastating impact occurs when the abuser is a parent. It affects the family members with the same intensity with which it affects the dependent person. The family as a unit would have to be assessed to delineate its strength and weakness in order to meet their well being. Therefore researcher feels the need to assess the level of knowledge and attitude of family members towards ill effects of alcoholism. The Objectives of the study were to assess the knowledge and attitude of family members towards ill effects of alcoholism, to find out association with selected demographic variables such as age, gender, educational status, habitat, monthly income, type of family, relationship with alcoholic and history of alcoholism in family on knowledge and attitude regarding ill effects of alcoholism and to find out relationship between knowledge and attitude score.

Methods: A Descriptive study was conducted on 60 family members of alcoholics selected by purposive sampling technique. Data was collected by administering a Structured Knowledge Questionnaire and The Scale for Assessment of Attitudes toward Drinking and Alcoholism, Second Version. The data was analyzed in terms of the objective of study using descriptive and inferential statistics.

Results: The overall mean knowledge score was found to be 16.3 and overall mean attitude score was 81.3. There was no significant association between knowledge and selected demographic variables. There exists a significant association between attitude and selected demographic variables such as educational status and monthly income.

Discussion: Overall findings showed that, respondents had moderate knowledge (38.3%) and neutral attitude (96.7%) towards ill effects of alcoholism. So enhancement in both knowledge and attitude aspect is required.

Keywords: knowledge, attitude, family members, ill-effects, alcoholism.

I. INTRODUCTION

Alcohol has been in common use since before records began. From the earliest time to the present, alcohol has played many crucial roles like thirst quencher, for enhancing enjoyment and the quality of life. Alcohol is used as a social lubricant and relaxation facilitator, which provides pharmacological pleasure but when the same alcohol is misused, it turns into an evil, which is sufficiently inflammable to burn the families, society and country. For most of the people, drinking alcohol is nothing more than a pleasant way to relax. Once the person starts drinking alcohol he gets addicted to it, which makes him to repeat the activity to feel the same pleasure.⁽¹⁾

The word alcoholism and alcoholic were first used by Dr. Magus Huss, a Swedish physician. Egyptian Osiris and Roman Bacchus were patrons of high power related to alcohol.⁽²⁾ I. The Bible sanctioned the social use of wine but it also records divine commands to abstain.⁽³⁾ There was a cultural attitude leaning more towards abstinence but permissive ritualistic sanctity of alcohol emerged in the later social structure The utilitarian (nature of alcoholism for pleasure and pain emerged during the twentieth century.⁽⁴⁾

WHO ranked alcohol dependence disorders as ninth among ten medical disorders causing morbidity in the world; based on results from the third generation epidemiological studies.⁽⁵⁾ Alcohol is becoming more widely used in Asian countries where opium was formerly the main drug abused. Over the past 30-40 years, alcohol consumption was increased by quantity and frequency. The age at which people start drinking has also declined. The prevalence of alcoholism among adolescence and young adults are alarmingly high.⁽⁶⁾

Alcohol is the most commonly used recreational drug. Taken in moderation, it can be compatible with healthy life style. But alcohol abuse causes problems that reach far beyond drinkers themselves. Alcoholism is defined as "the nations' number one health problem" a major cause of disrupted family life, automobile and industrial accidents, poor job performance, and increasing crime rates. Cirrhosis of liver, almost

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invariably a result of alcohol abuse, is the seventh leading cause of death. In addition, alcohol has been implicated as a contributor to 50% of fatal automobile accidents, 53% of fire deaths, 45% of drowning, 22% of home accidents, and 36% pedestrian accidents. Violent crimes attributed to alcohol abuse include 64% of murders, 41% of assaults, 34% of rapes, 30% of suicides, and 60% of child abuse. The financial toll of alcohol abuse is also too heavy.⁷

According to current concept, alcoholism is considered as a disease and alcohol a “disease agent” which causes acute and chronic intoxication, toxic psychosis, cirrhosis of liver, gastritis, pancreatitis, cardiomyopathy and peripheral neuropathy⁸. Also evidence in mounting that is related to cancer of mouth, pharynx, larynx and oesophagus. The health problem for which alcohol is responsible are only part of social damage, which includes family disorganization, crime and loss of productivity.⁽⁹⁾

Drinking is considered harmful when alcohol consumption has actually caused physical or psychological harm.⁽¹⁰⁾ People with alcohol abuse have one or more of the alcohol related problems over a period of one year like failure to fulfill work or personal obligations, recurrent use in potentially dangerous situations.⁽¹¹⁾

The effects of alcoholism on the family are emotional symptoms like shame, anger, rage, low self-worth, stunted emotional development, irresponsibility as well as over responsibility, suppressed feelings, and dishonesty⁽¹²⁾. Relational symptoms include things like intimacy issues, manipulation, co dependency, domestic violence, sexual issues, lack of trust, and difficulty in communication.⁽¹³⁾

Families of alcoholics are more disturbed in all areas of their family environment and family burden when compared to non-alcoholic families. The consequences of alcoholism in the family are role rearrangements or role transfer. The wives of the alcoholic husbands have to take over the family responsibilities and in some young children are the victims.⁽¹⁴⁾

The effects of alcoholism in families are difficult to overcome; yet without treatment, they can be devastating for the long-term. With the right approach and support, positive steps can be taken to improve lives.⁽¹⁵⁾

II. MATERIAL AND METHOD

Research Approach:- A quantitative research approach was considered the best to assess the knowledge and attitude towards ill effects of alcoholism.

Research design- Non-experimental descriptive design was utilized to achieve the objectives of the study.

Research setting- Setting is the physical location and condition in which data collection takes place. The study was conducted at SGRD Hospital, Vallah, Sri Amritsar. This hospital is approximately 950 bedded hospital located at Mehta road, P.O. Vallah, Amritsar.

Target population comprised of family members of alcoholics at SGRD Hospital, Vallah, Sri Amritsar.

Sample and sampling technique- Sample of 60 wives of alcoholics were selected using Purposive sampling technique, a type of non-probability sampling approach.

Inclusion Criteria:

- who are first degree relatives of alcoholics.
- Willing to participate.

Exclusion Criteria:

- Who were not willing to participate in the study

Description of tools: The tool to assess the level of knowledge was developed by the investigator after reviewing the related literature and guidance from experts in the fields and to assess the level of attitude “The Scale for Assessment of Attitudes toward Drinking and Alcoholism, Second Version” was used. The questionnaire consisted of 3 parts as follows: Part I– Socio-demographic profile Part II– Self structured Knowledge questionnaire Part III- The Scale for Assessment of Attitudes toward Drinking and Alcoholism, Second Version

Part I

Demographic data consisting of 8 items seeking information about the baseline data such as age family members profile such as Age, gender, educational status, habitat, monthly income, type of family, relationship with alcoholic, history of alcoholism in family. Part II The questionnaire consists of 30 questions. A score of one was given for each correct response and a score 0 was given for each incorrect response.

III. RESULTS

Table-1: Frequency and percentage Distribution of Demographic profile

N=60

Demographic variables	Frequency (f)	Percentage (%)
Age (in years)		
a) 15-25 years	11	18.3
b) 26-35 years	19	31.7
c) 36-45 years	16	26.7
d) Above 45 years	14	23.3
Gender		
a) Male	30	50.0
b) Female	30	50.0
Educational status		
a) Informal education	2	3.3
b) Primary education	16	26.7
c) Higher education	25	41.7
d) Graduate	17	28.3
Habitat		
a) Rural	31	51.7
b) Urban	29	48.3
Monthly income (Rs)		
a) Below 10000	9	15.0
b) 10001-20000	19	31.7
c) 20001-30000	22	36.6
d) Above 30000	10	16.7
Family type		
a) Nuclear family	47	78.3
b) Joint family	13	21.7
Relationship with alcoholic		
a) Parents	14	23.3
b) Siblings	22	36.7
c) Wife	13	21.7
d) Children	11	18.3
History of alcoholism in family		
a) No	42	70.0
b) Yes	18	30.0

Table 1 shows the socio demographic characteristics of family members i.e. age, gender, educational status, habitat, monthly income, family type, relationship with alcoholic, history of alcoholism in family.

Regarding age, the result shows that 31.7% of respondents belong to the age group 26-35 years followed by 26.7% noticed in the age group of 36-45 years as compared to 23.3% found in the age group of above 45 years whereas 18.3% belongs to the age group of 15-25 years.

The results indicated that 30 respondents (50%) were male and 30 respondents (50%) were females.

Educational level established that majority 41.7% of the respondents had education of higher secondary school followed by 28.3% of the respondents were graduate, 26.7% of the respondents had completed the primary school education, whereas only 3.3% were found to have informal education.

Among the total respondents under study it is evident that 51.7% of respondents reside in rural area whereas only 29% reside in rural area.

Monthly income reveals that majority 36.7% of respondents have family income of Rs 20001-30000 followed by 31.7% have family income of Rs 10001-20000, 16.7% have income above Rs 30000 and rest 15% were noticed to have below Rs 10000 of family income.

Data on type of family depicts that higher percent of respondents 78.3% emerged from nuclear family background as compared to 21.7 % noticed with joint family.

Data on relationship with alcoholic depicts that higher per cent of respondents 36.7% were siblings followed by 23.3% were parents, 21.7% were wives and only 18.3% were children.

It is found in the present study that 70% of respondents does not have family history of alcoholism whereas 30% have positive family history of alcoholism,

in which 3 had brother, 10 had father and 5 had grandfather who were alcoholics in their family.

Table-2: Frequency and Percentage distribution of knowledge score of family members.

N=60

Knowledge	Frequency(f)	Percentage	Mean	SD
Inadequate knowledge (≤50%)	23	38.3	16.35	2.20
Moderate knowledge (51%-75%)	37	61.7		
Adequate knowledge (>75%)	-	-		

Maximum score= 30, Minimum score= 0

Table-2 depicts that majority 61.7% of family members have adequate knowledge towards ill effects of alcoholism. It is observed that the respondents had mean of 16.35 with standard deviation of 2.20.

Table 3: Frequency and percentage distribution of attitude score of family members towards ill effects of alcoholism.

Level of attitude	Frequency(f)	Percentage (%)	Mean	SD
Unfavorable attitude (29-68)	2	3.3	81.35	6.73
Neutral attitude (69-106)	5	96.7		
Favorable attitude (107-145)	-	-		

Maximum score= 145, Minimum score= 29

Table-3 depicts that maximum (96.7%) family members had neutral attitude, (3.3) family members had negative attitude and none of the family member had positive attitude towards ill effects of alcoholism. It is observed that respondents had mean of 81.35 with standard deviation of 6.73. Thus it can be concluded that majority of family members had neutral attitude towards ill effects of alcoholism.

Table-4: Relationship between mean knowledge and attitude score of family members towards ill effects of alcoholism.

N=60

Variables	Mean	SD	r
Knowledge	16.35	2.20	0.043
Attitude	81.35	6.73	

Table 4: indicates that the mean knowledge score was 16.35 with standard deviation of 2.20 and mean attitude score was 81.35 with standard deviation of 6.73. The correlation coefficient in between knowledge and attitude was 0.043. Thus it was concluded that there is low positive co-relation between knowledge and attitude and knowledge had very less impact over the attitude of family members.

Table-5: Association of Knowledge score of family members with selected demographic variables.

N=60

Variables		Level of knowledge	df	χ^2	p-value
Inadequate(f)		Moderate +Adequate (f)			
Age (in years)					
15-25years	4	7	3	1.19	0.75 ^{NS}
26-35years	6	13			
36-45 years	6	10			
Above 45 years	7	7			

Gender					
Male	11	19	1	0.07	0.79 ^{NS}
Female	12	18			
Educational status					
Informal education	0	2			
Primary education	8	8	3	3.84	0.27 ^{NS}
Higher secondary	7	18			
Graduate	8	9			
Habitat					
Rural	12	19	1	0.004	0.95 ^{NS}
Urban	11	18			
Monthly income					
Below10000	4	5			
10001-20000	8	11	3	1.97	0.57 ^{NS}
20001-30000	6	16			
Above 30000	5	5			
Type of family					
Nuclear	19	28	1	0.40	0.52 ^{NS}
Joint	4	9			
Relationship with alcoholic					
Parents	5	9			
Siblings	7	15	3	1.65	0.64 ^{NS}
Wife	5	8			
Children	6	5			
History of alcoholism in family					
Yes	7	11	1	0.003	0.95 ^{NS}
No	16	26			

*Significant at $p < 0.05$ level NS: Not significant

Table 4: depicted the summary of Chi-Square test that showed the knowledge score of demographic variables i.e. age, gender, educational status, habitat, monthly income, type of family, relationship with

alcoholic and history of alcoholism in family does not show any statistical significant association with the demographic variables.

Table-6: Association of Attitude score of family members with selected demographic variables.

N=60

Variables	Mean \pm SD	df	F value	P Value
Gender				
Male	81.0 \pm 6.29	58	0.39	0.40 ^{NS}
Female	81.7 \pm 7.24			
Habitat				
Rural	81.2 \pm 7.01	58	0.14	0.74 ^{NS}
Urban	81.4 \pm 4.8			
Type of family				
Nuclear	80.8 \pm 6.94	58	0.99	0.27 ^{NS}
Joint	83.0 \pm 5.87			
History of alcoholism in family				
Yes	82.3 \pm 6.22	58	1.80	0.38 ^{NS}
No	79.0 \pm 7.46			

*Significant at $p < 0.05$ level NS: Not Significant

Table-6: depicted the summary of t-test showed the attitude score of demographic variables i.e. gender, habitat, type of family, history of alcoholism in family

does not show any statistical significant association with the demographic variables.

Table-7: Association of Attitude score of family members with selected demographic variables.

N=60

Variables	Mean±SD	df		F value	P value
		Between groups	Within groups		
Age (in years)					
15-25 years	82.4±5.53				
26-35 years	80.1±7.71	56	3	1.46	0.23 ^{NS}
36-45 years	83.8±6.18				
Above 45 years	79.3±6.39				
Educational status					
Informal education	78.0±11.3				
Primary education	76.8±6.16	56	3	5.21	0.003*
Higher secondary	84.4±5.54				
Graduate	81.3±6.73				
Monthly income					
Below 10000	76.6±7.29				
10001-20000	78.5±7.05	56	3	2.96	0.04*
20001-30000	82.7±5.93				
Above 30000	85.2±6.73				
Relationship with alcoholic					
Parents	82.07±7.38				
Siblings	81.7±7.22	56	3	2.00	0.12 ^{NS}
Wife	83.4±5.02				
Children	77.1±5.58				

*Significant at $p < 0.05$ level NS: Not Significant

Table 7: represents association of attitude score with selected demographic variables such as age, educational status, monthly income and relationship with alcoholic. It is calculated by applying parametric test ANOVA test. It is noticed from the findings that educational status and monthly income was found to statistically significant at $p < 0.05$ level so there was statistical association of educational status and monthly income with attitude score, whereas demographic variable such as relationship with alcoholic does not show any statistical significant association with attitude score.

IV. DISCUSSION

The characteristics of the demographic variables as depicted in table 1, were described in terms of their frequency and percentage distribution which showed that 31.7% of the respondents were in age group 26-35 years, equal number of respondents i.e 50% were male and 50% were females, 41.7% of respondents had higher education, 51.7% respondents

belonged to rural area, 36.7% of respondents had family income of rupees 20001-30000, 78.3% of respondents belonged to nuclear family, 36.7% of the respondents were siblings of alcoholics and 70% respondents had no family history of alcoholism.

Slightly consistent findings were reported in the study by Zhang L. et al (1997)⁶⁴ which reveal that family history of alcoholism contribute to develop alcohol behavior in family members.

Findings of the present study revealed that majority of the respondents (61.7%) had moderate knowledge regarding ill effects of alcoholism. Similar findings were reported by the study conducted by Haemmerlie FM et al. (1992)⁶⁵ that majority of care givers had moderate knowledge of negative effects of alcoholism.

Findings of the present study revealed that 38.3% of the respondents had inadequate knowledge which is slightly consistent with the findings of other study conducted by Mathew S. (2004)⁶⁶ which revealed that more than half (52%) of family members had inadequate knowledge regarding alcoholism.

The present study revealed that majority of the respondents (96.7%) had neutral attitude towards ill effects of alcoholism which opposes the findings of other study⁶⁶ which revealed that 60% of family members had negative attitude towards alcoholism.

In present study the association between demographic variables (age, gender, educational status, habitat, monthly family income, type of family, relationship with alcoholic and family history of alcoholism) and knowledge score is found to be non significant and accordant findings were reported in another study which showed *Ravinder K (2006)*⁶⁷ that age, residential area, type of family, family income had no statistical significant association with knowledge score.

The association between demographic variables (educational status and monthly family income) and attitude score is found to be significant ($p>0.05$) which opposes the findings of other study⁶⁷ that reported no statistical significant association between family income, educational status and attitude score.

The correlation coefficient between knowledge and attitude was 0.04 which is consistent with the findings of other study by *Vanita S. (2009)*³⁷ which shows positive relationship between knowledge and attitude with the score of $r=0.3$ which is significant at $p<0.05$ level.

Nursing implications

The findings of the present study had implications for the nursing profession. The implications have been written under the following headings- Nursing Practice, Nursing Administration, Nursing Education, and Nursing Research.

Nursing Practice

- 1) Present study could indirectly help nurses to understand the knowledge of respondent regarding ill-effects of alcoholism.
- 2) It can be included in the health educational programme, which should be carried out in high schools, colleges and in community.
- 3) Teaching parents to provide children with a secure and healthy home environment to avoid alcoholism.
- 4) Planned health education programme by the health professional should be made an ongoing process in the community and the hospital.

Nursing Education

- 1) Nurse educators should give more importance to alcoholism and drug abuse in the curriculum as they are dealing with adolescent students, who are future nurses and need to have adequate knowledge in educating and preventing the community from alcoholism.

- 2) Nursing education should emphasize on preparing prospective nurses to impart health education by using various methods of educational technology

Nursing administration

- 1) Nurse administrators in the hospitals, in the community can organize in-service education for nurses and health awareness camps for the community about alcoholism and its consequences.
- 2) The administrator should organize continuing education programme for the nursing personal regarding ill-effects of alcoholism.

Nursing Research

- 1) The descriptive survey provides baseline for conducting other research studies.
- 2) The study will be a motivation for budding researchers to conduct similar studies on a large scale.
- 3) Research should be conducted on preparation of better practice of nursing care and development of good and effective policy to provide quality care to the respondent's ill-effect of alcoholism.

V. RECOMMENDATIONS

Based on the study it is recommended that:

- A replication of present study can be conducted on large population and wider area.
- An experimental study can be conducted to evaluate the effectiveness of information guide sheet on ill-effects on alcoholism.
- A comparative study can be conducted to compare the findings between rural and urban areas.

VI. CONCLUSION

The nurses play an important role in comprehensive education of the family members in health care delivery system. Such efforts will not only improve their knowledge and attitude but also improve their relationship with alcoholics.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Malhotra A, Sahoo MK, Grover S. Alcohol and Global burden of disease. *Indian Journal of Psychological Medicine*. 2005; 26(1):13-20.
2. Shetty KS. Alcohol, alcoholism, addiction and de-addiction. Mangalore. Prajna Publishers; 1998.
3. Park K. Park's text book of preventive and social medicine. 18th ed. Jabalpur: M/S Banarsidasbhanot publishers; 2005. P.635
4. Sadock BJ, Sadock VA, Kaplan. Synopsis of psychiatry, behavioral sciences. 10th edition. Philadelphia: Lippincott Williams and Wilkins; 2004
5. NIAAA. Consequences of alcohol. (internet) available from <http://www.niaaa.gov>

6. Achar, Textbook of Pediatrics. 3rd edition; Orient Longman Publications. 2003
7. Alcohol. [Online]. 2004 [cited 2006 Apr 6]; Available from: URL: [http:// www.navis.gr/alcohol.Htm-19k](http://www.navis.gr/alcohol.Htm-19k).
8. B.T. Basavanthappa. Textbook of Nursing Research. Review of Literature, Jaypee Brothers. New Delhi; 2007.
9. Gail W. Stuart, Michele T. Laraia. Principles and practice of Psychiatric Nursing. Missouri. Mosby Publication; 2005.
10. Louise Rebraca Shives Basic concepts of psychiatric Mental Health Nursing. 6th edition, Chapter 26: 2007
11. Jones BT, Corbin Wand Frame K. Conceptualizing Addiction: A review of Expectancy Theory and Alcohol Consumption. *Addiction* 2001;96:57-72
12. Singhal, Nagalakshmi, "Psycho-social study". 1992, NIMHANS Journal.
13. Fontaine & Fletcher, Substance related disorders, Mental health nursing, 2002, Addison & Wesley, 3rd edition: 278-279.
14. Chakravarthy C. Stress among the wives of alcoholics. 1992, Unpublished master's thesis, Madras University, India.
15. Suman, L.N., Nagalakshmi, S.V., Family Interaction patterns in alcoholic families, NIMHANS Journal, 1995, 13(1): 47-52
16. Zhang L. Welte J. Wieczorek WF. Peer and parental influences on male adolescent drinking. *Substance use misuse*. December 1997; 32(14): 2121-3.
17. Haemmelle FM, Merz CJ. Nelson SR. College vs junior high school student's knowledge of alcohol as a teratogen. December 1992; 71(3): 809-10. 66.
18. Mathew S. A study to assess the knowledge and regarding psychoactive substance use among adolescent group. Bangalore Rajiv Gandhi University of Health Sciences 2004.

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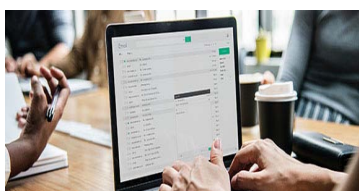
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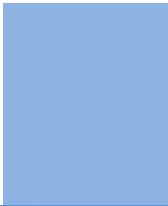
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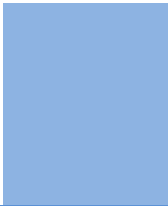
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TIPS FOR WRITING A GOOD QUALITY MEDICAL RESEARCH PAPER

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

4. Use of computer is recommended: As you are doing research in the field of medical research then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

5. Use the internet for help: An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.



6. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

7. Revise what you wrote: When you write anything, always read it, summarize it, and then finalize it.

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

9. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

10. Use proper verb tense: Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.

Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

19. Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.



20. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.

21. Adding unnecessary information: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

22. Report concluded results: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

23. Upon conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium through which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

INFORMAL GUIDELINES OF RESEARCH PAPER WRITING

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear: Adhere to recommended page limits.



Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.
- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.



The following approach can create a valuable beginning:

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets the declared objectives.

Approach:

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

Procedures (methods and materials):

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

Materials may be reported in part of a section or else they may be recognized along with your measures.

Methods:

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

What to keep away from:

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.



Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.

Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

What to stay away from:

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

Figures and tables:

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."



Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

THE ADMINISTRATION RULES

Administration Rules to Be Strictly Followed before Submitting Your Research Paper to Global Journals Inc.

Please read the following rules and regulations carefully before submitting your research paper to Global Journals Inc. to avoid rejection.

Segment draft and final research paper: You have to strictly follow the template of a research paper, failing which your paper may get rejected. You are expected to write each part of the paper wholly on your own. The peer reviewers need to identify your own perspective of the concepts in your own terms. Please do not extract straight from any other source, and do not rephrase someone else's analysis. Do not allow anyone else to proofread your manuscript.

Written material: You may discuss this with your guides and key sources. Do not copy anyone else's paper, even if this is only imitation, otherwise it will be rejected on the grounds of plagiarism, which is illegal. Various methods to avoid plagiarism are strictly applied by us to every paper, and, if found guilty, you may be blacklisted, which could affect your career adversely. To guard yourself and others from possible illegal use, please do not permit anyone to use or even read your paper and file.



CRITERION FOR GRADING A RESEARCH PAPER (COMPILATION)
BY GLOBAL JOURNALS

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals.

Topics	Grades		
	A-B	C-D	E-F
<i>Abstract</i>	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
<i>Introduction</i>	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
<i>Methods and Procedures</i>	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
<i>Result</i>	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
<i>Discussion</i>	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
<i>References</i>	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring



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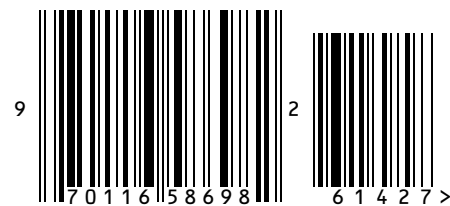
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ISSN 9755896



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