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Abstract: Digitization has revolutionized the world in many ways. One of the most important areas which has been also impacted is the society which has seen many role changes within the family. Because of traditions, family members having set roles as of now find themselves with different roles because of impact of the IT revolution. Women have always had a special role in the society. Unfortunately in most of the societies their role has been constrained to homes and within the four walls. Because of other taboos their movement also was not allowed outside the house and social or other interaction with non-family members was very restricted. This was common across different households of all sections of the society. However the educated class in urban areas were slightly better off. Also the women employed in professional work like doctors had an edge regarding their movement and role in home and society because of the very nature of their jobs. The societal constraints still was a barrier in the overall context. Empowerment to women has been the focus of successive governments that came to power in the country. Many women friendly laws were enacted. Real power came to women with coming of digitization. The objective of this paper is to study the impact of digitization on women doctors in Delhi NCR. The research methodology followed is framing questions on indicators of empowerment and seeking answers from women doctors in Delhi NCR followed by analysis. The questionnaire has been framed on four dimensions that describe the various different aspects of empowerment.

Key words: women doctors, digitization, women empowerment, modern medicine.

I. INTRODUCTION

India can very well be seen as a country, which was in shackles as far the economic activity was concerned for good about three decades since independence. The economy was being run in the socialistic pattern had a noose like control during this period of three decades. It was characterized by policies, which probably had little to offer to private investment, and regulations, which led to strangle, hold of industries with no leeway to them to be creative. Foreign investment was frowned upon and probably thought as a threat to the country's socialistic thinking. This led to the growth rate called the Hindu growth rate of less than 4 %. Arvind Subramanium in his book 'India's Turn: Understanding the Economic Transformation' has argued the turnaround of the Indian economy to have been initiated well ahead in the decade of the 80's rather than the 90's as is

normally thought of. The growth rate is more impressive during the former decade. This was possible just because of the attitudinal change in the minds of lawmakers. Private investment got its due with progressive policies being drafted and coming into effect in 90's. This phase is so important in India's economic history that others effects like societal changes also started taking place. Numbers of women in workplace saw a jump in fields which saw an exponential growth like the IT. Medical field was also affected. However a report by McKinsey and Company of 2018 has indicated the workforce to be only 25 % of the total. Profession was measly represented by women during the time when India gained independence in 1947. Even after that as per statistics, the degrees by the women earned in the year 1952 in the field of medicine was only 5 % of the total. This gradually climbed to some parity in the year 1988 where nearly 50% of entrants in medical colleges were women. However this was not a matter which could be taken as a positive step because the subsequent entry into post graduate and doctoral levels was only about one third. The shift was mainly attributed to a number of reasons. Foremost was the societal thinking which earlier was not ready to accept women as part of medical profession. This unfortunately translated into women folk staying away from hospitals also as many were not prepared to be treated from male doctors. Another reason was the opportunity the economy provided to women at large to partake in the development of the country by loosening the autocratic control which encouraged private investment in many fields, medicine being one of them. Lastly because of the exposure through the medium of firstly the radio, later of the TV and still later because of the entry of private TV channels in the 90's. The shift initially a slow one turned into an exponential growth, which encouraged women into the medical field. Empowerment of women has been on the agenda of many developing countries. However because of the century old traditions, the pace of overcoming these shackles has been slow. In India also because of social customs, taboos, traditions and resistance from society itself the story of empowerment was a slow one. The coming of the age of digitization which gave access to one and all to the information set the revolution in empowering women. The results are encouraging but still a long road ahead needs to be covered.

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The paper makes an effort to study these gains in a profession which is considered very progressive in our society. Malhotra, R 2015 has spoken about the impetus received to empowerment of women because of digitization. Sinha et,al,2017 has also discussed impact of digitization in Mumbai.

II. LITERATURE REVIEW

A. Challenges of Women in Medical Profession

Women participation in medical profession was low because of traditional role of the women in the society. The early twentieth century saw an increased demand for women doctors in modern medicine primarily based on increased awareness of populace of the country. By 1929 more and more medical colleges started admitting women . By this time there was one medical college and four medical schools for women (Forbes 1998:165). Rise in number of women doctors also saw an increase in women patients (Ramanna 2001: 233-248). Enrolment of women has gradually increased in medical colleges in the country since independence. Even medical careers have changed over last three four decades. Many a women doctors have taken up those fields which probably were not possible in the past. Women have started excelling in the field of medical research as well in the field of teaching (Dewan, et.al,2007:598-600). Fields, which have been popular, are pathology, pediatrics and social and preventive medicine (Malhotra 2008:22-27). However because of number of restraining factors like family commitments, child rearing duties and longer working hours in certain specific fields, women tend to specialize less than their male counterparts. In academic fields also women advancing to higher ranks of Professor and Associate Professor are lower. (Jagsi et.al, 2006:285). In the fields of cardiology and specialized surgery there is a huge gap between the total men and women doctors. The main reason can be attributed to number of years taken to specialize in these fields and demanding working hours specially the emergency calls. Even in today's progressive society because of physical contact women remain from surgery specialization. The popular fields are gynecology and obstetrics, pediatrics, ophthalmology, dermatology, radiology and anesthesiology. The main criterion of women entering in the field of specialization is availability of time which is available to them to look after the other than professional commitments (Bhadra, 2009: 24-31). The skewed representation of women in different departments and decision-making positions in higher echelons of power in the profession is also regressive in the empowering of women doctors.

B. Theoretical Framework and Women Empowerment in field of Medicine

Women's Empowerment has many definitions. Kabeer (1999) has given a most practical definition, as per which 'the women increase their ability to make life choices'. Other definitions include Bennett (2002) who describes empowerment as "the enhancement of assets and capabilities

of diverse individuals and groups to engage, influence and hold accountable the institutions which affect them."

Closely related are concepts of 'gender equality' and 'gender equity'. While the former can be defined as equality of both the genders under the law, opportunity and voice; the latter deals with the fact that both genders have different needs, they have different preferences and interests. Thus the equality of outcome would involve differential treatment of both the genders from one another (Reeves and Baden 2000:10).

Measuring Empowerment is always challenging, firstly because of the different metrics which can be used. Also the behaviour and attributes that can be used to measure Empowerment have different meaning in different contexts. For e.g., a women going independently to a movie in a western country probably is taken for granted whereas in most of the Asian countries it will raise eyebrows of many a people. Empirical research has been done in this field. Some of the significant have been of Mason and Smith 2000; Jejeebhoy 2000; Kritz et al. 2000; Schuler et al. 1995b; Hashemi et al. 1996. The Universally accepted phenomenon, which can be said common to all these research is unanimous agreeing on the fact that context, is so important when we try to measure the impact of women's empowerment on outcome. We can safely deduce that contextual factors always would take a precedent over individual factors.

Another viewpoint of many a researcher is that Empowerment is defined as a process as opposed to a state of being. This view point presents it own challenges. In this case direct measurement is very difficult and help of proxy variables is taken like education level of women, knowledge, etc. (Ackerly 1995).

C. Empowerment Indicators based on Empirical Studies

Anju Malhotra, et. al, 2002, in their work 'Measuring Women's Empowerment as a variable in International Development' have analyzed a number of papers written on Women Empowerment . The analysis of the same, categorizes empowerment measures into broad dimensions . This is followed by further division of empowerment indicators at two levels; first at the individual level and the second at aggregate level.

Dimensions of Empowerment: These are very broad and can be further analysed at household, community and broader arenas. These are as under with a few examples:-

Economic: (household-how much women have control over the income; community- how easy is access of women to jobs of their liking; broader arenas- number of women in higher echelons on a particular industry or department).

Socio- Cultural: (household – how free are the women to go outside their houses for employment, social commitment and recreational; community – participation and members of social group; broader arenas- broader range of options available for education and participation at national level activities).



Familial/Interpersonal: (household- selection of marriage timing; community- selection of life partner; broader arenaslegal and social support for divorce).

Legal: (household- legal rights awareness; community- legal rights enforcement; broader arenas- promulgation of women friendly laws).

Political: (household-awareness of the political system; community – involvement of women in political system; broader arenas- women's representation at regional and national level of government).

Psychological: (household- individual self-esteem; community- awareness of delivery of justice; broader arenaswomen's inclusion in various spheres of activity).

III. RESEARCH METHODOLOGY

A. Research Gap and Need to Study

Studies on women empowerment in India in various fields are very few in numbers and nonexistent in medical profession. This profession is one of the most respected one in the country. It is also considered as being one of the progressive ones because of the inherent characteristics of the profession. A study on women empowerment in this field would be a good yard stick to compare equally progressive and also less progressive profession from empowerment point of view.

B. Objective

To study impact of digitization in empowering women doctors in the National Capital Region at (1) Home and at (2) Work Place

C. Hypothesis:

 $H1_0$: There is no significant relation between digitization and financial empowerment of women doctors at home.

H1_A: There is a significant relation between digitization and financial empowerment of women doctors at home.

H2₀: There is no significant relation between digitization and empowerment in legal aspects of women doctors at home.

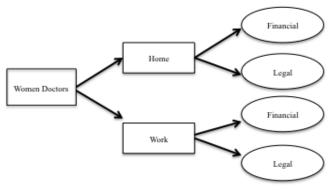
H2_A: There is a significant relation between digitization and empowerment in legal aspects of women doctors at home.

H₃₀: There is no significant relation between digitization and financial empowerment of women at work place.

H3_A: There is a significant relation between digitization and financial empowerment of women at work place.

H4₀: There is no significant relation between digitization and empowerment in legal aspects of women at work place. H4_A: There is a significant relation between digitization and empowerment in legal aspects of women at work place.

D. Theoretical Model:



E. Methodology:

The research methodology is a scientific approach for analyzing a research problem and drawing logical deductions. The information has been got by firstly undertaking literature review and devising a measurement scale for its measurement and administering a questionnaire to women doctors employed in various hospitals in Delhi NCR region.

F. Sample Size:

The questionnaire was administered to 110 married women doctors in various hospitals across Delhi NCR.. The hospitals by themselves were dealing with multi-specialty / limited specialty. A total of 77 valid responses were received back.

G. Measurement Scale:

The questionnaire was subdivided into four categories namely individual level indicators financial and non-financial at home and at the work place. Each question was assessed on five point Likert scale (1-5) with score 1 being 'strongly disagree' and score of 5 being 'strongly agree' with the statement. A total were 13 questions were framed and administered to the respondents:-

(1) Individual Factors (Financial) at home:

Has digitization helped you get more control and say over household expenditure?

Has digitization helped in controlling the expense of your own earnings?

(2) Individual Factors (Legal) at home:

Has digitization helped you in better executing of your role at home (wife, mother, sister, daughter, daughter in law).

Has digitization helped you in better management of your home.

Has digitization helped you in ensuring domestic violence does not take place or is reduced.

Has digitization made you aware of your rights as an individual and as a citizen.

(3) Individual Factors (Financial) at Work Place:

Has digitization helped in equal remuneration for same work at work place.

Has digitization helped in enhancing your reach to patients and opening other avenues of income.



(4) Individual Factors (Legal) at Work Place:

Has digitization helped in gender neutrality at work place. Has digitization helped curb sexual harassment at work place.

Has digitization helped in ensuring flexible timing to your working hours.

Has digitization helped you in seeking professional help from you fellow doctors both in and outside the hospital.

Has digitization puts you in better position to fight for your rights at the work place.

IV. RESEARCH FINDINGS AND ANALYSIS.

A. Demographics:

Table 1:Total Years of Experience

		Frequency	Valid Percen t	Cumulativ e Percent
Vali d	0-10 years Mor	27	35.1	35.1
	e than 10	50	64.9	100.0
Total	years Total	77 77	100.0	

Table 2: Educational qualifications

		Valid Percen	Cumulativ
	Frequency	t	e Percent
MBBS	23	29.9	29.9
MD or			
Equivalen	54	70.1	100.0
t			
Total	77	100.0	
Total	77		

Analysis of Demographics reveals that 27 (35.1%) respondents had less than 10 years of experience and 50(64.9%) had over 10 years of experience. As regards the educational qualifications, 23(29.9%) respondents possessed the basic MBBS degree and the balance 54(70.1%) had a specialization like MD or equivalent. The responses are from women doctors employed in different type of hospitals and possessing wide spectrum of experience and having different levels of medical expertise.

B. Findings of Responses to Questionnaire:

Table 3: Responses to Questionnaire

S	Question	Minimu	Maximu	Mean	Std
r		m	m		De
N					viat
О					ion
	Individual				
	Factors				
	(Financial) at				
	home				
1	Has digitization				
	helped you get				
	more control	1.00	5.00	4.259	.78
	and say over	1.00	3.00	7	477
	household				
	expenditure?				

2	Has digitization				
	helped in	1.00	7 00	4.467	.73
	controlling the	1.00	5.00	5	600
	expense of your own earnings?				
В	Individual				
Ь	Factors				
	(Non-Financial				
) at home :				
	•				
1	Has digitization				
	helped you in				
	better executing				
	of your role at	4.00		4.155	.81
	home (wife,	1.00	5.00	8	216
	mother, sister, daughter,				
	daughter in				
	law)				
2	Has digitization				
	helped you in			4 272	0.1
	better	1.00	5.00	4.272 7	.91 243
	management of			′	243
	your home.				
3	Has digitization				
	helped you in				
	ensuring domestic			4.623	62
	violence does	2.00	5.00	4.623	.62 910
	not take place			-	710
	or is reduced.				
4	Has digitization				
	made you aware			4.298	.72
	of your rights as	2.00	5.00	7	665
	an individual				
-	and as a citizen.				
С	Individual Factors				
	(Financial) at				
	Work Place:				
1	Has digitization				
	helped in equal				
	remuneration	2.00	5.00	3.922	.97
	for same work	2.00	5.00	1	016
	at work place.				
2	Has digitization				
	helped in				
	enhancing your				
	reach to	2.00	7.00	4.389	.69
	patients and	2.00	5.00	6	122
	opening other				
	avenues of				
1	income.				
D	Individual				
	Factors (Non-Financial				
) at home :				
1	Has digitization				
	helped in			1.061	97
	gender	2.00	5.00	4.064	.87 866
	neutrality at	170	5.00 Exploring (ngineering.	600
	work place		8		

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2	Has digitization helped curb sexual harassment at work place.	2.00	5.00	4.259	.83 355
3	Has digitization helped in ensuring flexible timing to your working hours.	2.00	5.00	4.376	.70 783
4	Has digitization helped you in seeking professional help from you fellow doctors both in and outside the hospital.	1.00	5.00	4.259	.78 477
5	Has digitization puts you in better position to fight for your rights at the work place	1.00	5.00	4.356	.75 436

C. Analysis on Responses on Empowerment Questionnaire:

All the responses above have a mean of greater than 4.00. This shows that the empowerment of women in all these fields have had a positive impact after the coming of digitization. The IT revolution has positively affected the women doctors to have a better say in the household matters both in financial and non-financial aspects both at home and at work place. They have also been able to better exercise their rights as an individual and a citizen. Likewise the opportunities for outreach to more patients has increased as well as scope of finding additional avenues for more income has also been possible. The digitization has also helped them to better address the problems of gender neutrality, sexual harassment, better utilization of flexible work timings, seeking professional help and knowing their rights at work place. Overall it can deduced that digitization has been responsible of empowering women doctors in Delhi NCR.

D. Hypothesis Result:

As mean score of all questions is more than 4.00 all the four hypothesis are rejected.

Hypothesis	Hypothesis Statement	Result
H1O	There is no significant relation between digitization and financial empowerment	The hypothesis is not supported

	of women doctors at home	
H2O	There is no significant relation between digitization and empowerment in social and legal aspects of women doctors at home.	The hypothesis is not supported
НЗО	There is no significant relation between digitization and financial empowerment of women at work place	The hypothesis is not supported
Н4О	There is no significant relation between digitization and empowerment in social and legal aspects of women at work place.	The hypothesis is not supported

E. Limitations of the survey

The limitation of the survey is that the same was done in Delhi NCR region, which has a highly cosmopolitan culture. The findings probably may not be applicable to smaller cities and towns because of the fact that the role of the women in society is similar to what has been existent from olden times. Further studies can be taken up for the same.

V. CONCLUSION

Medical profession has always been one of the most cherished professions in our country. This profession being one dominated by the men doctors in the 19th and also in first half of the 20th centuries has witnessed a slow transformation in allowing the women to join. The absence of women doctors also kept the women patients away from receiving medical treatment because of societal practices which prohibited close and physical contact between men and women. However the economic development saw a huge change in mindset of the people because of which the intake of women in this profession saw an exponential growth. The enrolment in medical colleges at present is more or less achieved parity in present times. However challenges remain in women representation in all disciplines mainly because of timings of professional work and other reasons. Empowerment a highly debated topic in today's context has always been a subject of study because it affects countries in both the developed and developing worlds. A sample study carried out on women doctors in Delhi NCR reflects a good score on all indicators. The study was carried out in Delhi NCR and the findings may not be applicable in smaller towns and cities.

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