Knowledge Sharing Behavior of Physicians (Dentists) in Hospitals

By J. Antonette Asumptha, M. Punniyamoorthy & Dr. Roshan Rayen

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Abstract- Now a days, there has been much interest for knowledge sharing within professional groups, like physicians in hospital. Knowledge sharing would be alarming if knowledge sharing is not done in hospitals were we deal with human lives. This study examines the factors affecting physician's knowledge sharing behavior within a hospital department by existing theories, the theory of reasoned action (TRA) and the theory of planned behavior (TPB). Here we have a slight differentiation, we compare TPB model to a model were Attitude is further sub divided depending upon age, gender, departments and hospital ownership status. (Ömer Gider & Saffet Ocak & Mehmet Top) Subjective Norms are subdivided among Peers, Top Management, Subordinates and Clients and PBC depending upon Perceived Ease of use and Perceived usefulness. Technology Acceptance Model (Davis et al, 1989) & will power eg: You must genuinely want to change your behavior and willpower is necessary to do that.

Keywords: knowledge sharing, physicians, types of knowledge, theory of planned model.

GJMR-K Classification: NLMC Code: WU 21

Strictly as per the compliance and regulations of:

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I. Review of Literature

Sharing knowledge of physicians within hospitals can realize potential gains and is critical to survive and prosper in competitive environments (O'Dell & Grayson,1998). Physicians are knowledge-intensive and principal professional group in hospitals. Their theoretical and practical knowledge is vital to the care of patients, and the quality of specialty-based clinical practices is a major determinant for patients' use of medical services. Knowledge sharing in this sense becomes all the more important for physicians in tertiary hospitals, because they are required to be research-oriented, creative in medical care, and ready to take new medical knowledge opportunities that can be acquired through various organizational learning mechanisms (OLMs) (Lipshitz & Popper, 2000). The ultimate objective of physicians' knowledge sharing is to elevate the quality and efficiency of care in hospitals. We consider Rayen Dental Care Centre. (RDCC) as the platform for the research study. Dentistry especially pediatric is talk of the season now.

II. Introduction

a) About Rayen Dental Care Centre (RDCC)

"We speak from our heart and not from our tongue when we explain the problem to the patient because ultimately truth prevails in the long run. We work on the above said principles and all our patients work are preferably appointment based.

Rayen's Dental centre located in the central zone (Heart) of Chennai is well known for its hygienic, outstanding, exceptional quality dental practice providing the latest updated scientific data pertaining to all specialities in dentistry. Apart from providing health service we are ignited with a passionate heart to handle our clients with utmost kindness. We provide a comfortable environment with subtle differences in every aspect of dental practice to provide quality care and that earmarks our difference from others".

b) History of Rayen Dental Care Centre

Rayen's dental centre which has been in health care services since 1964 in tuticorin and has been doing exceptional eye care services to the people in the southern border of tamilnadu. It has extended it's dental care services in chennai for the past five years. This practice strives and thrives with the sole aim of providing quality and concrete solutions to clients based on their individual needs. It has an enormous referral based practice because of the utmost satisfaction provided to the patient (Roshan Rayen, 2016).

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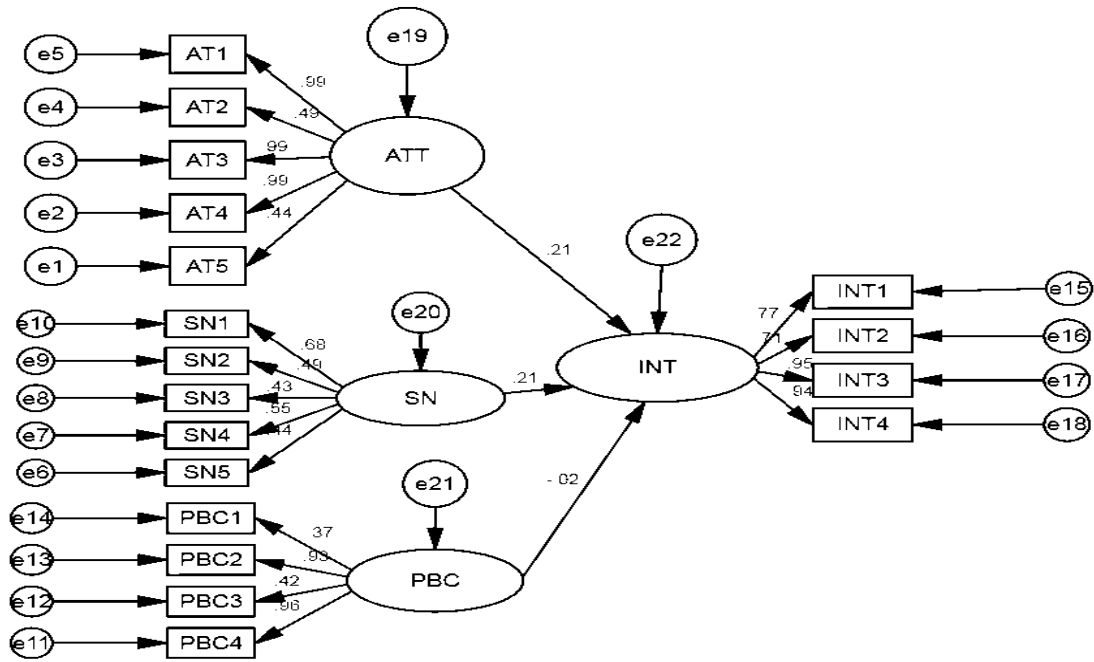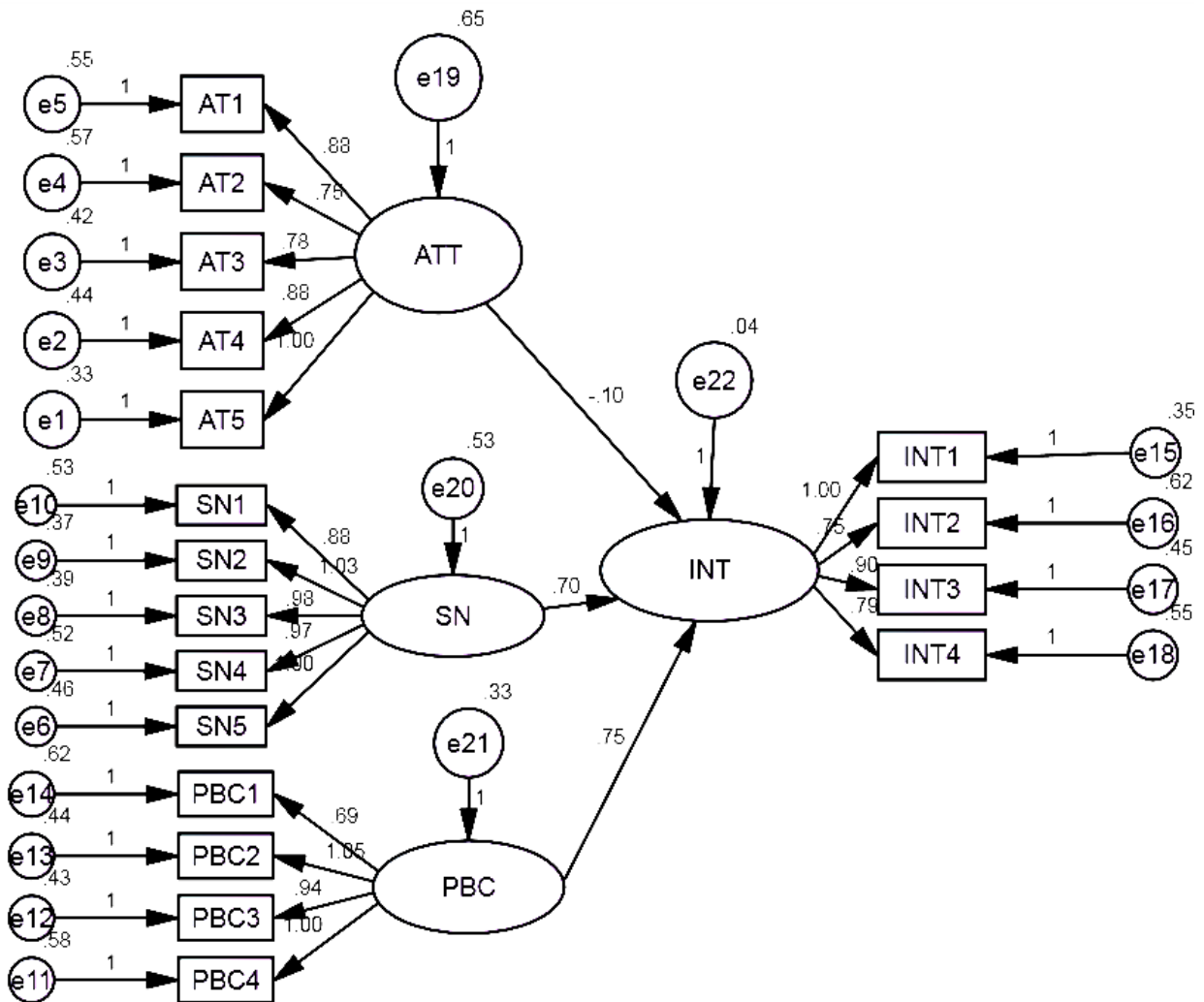*Author ρ: MD of Rayen Dental Care Centre.*

Figure 1: TPB Model

Figure 2

Here we have taken the social responsibility factor to be present hence there is no bias as we compare with both before and after the survey (i.e. awareness).

Table 1: Loadings of Before and After the Survey is Conducted

	Before	After
AT1	99	88
AT2	49	75
AT3	99	78
AT4	99	88
AT5	44	1
SN1	68	88
SN2	49	1.03
SN3	43	98
SN4	55	97
SN5	44	60
PBC1	37	69
PBC2	93	1.05
PBC3	42	94
PBC4	96	1
INT1	77	1
INT2	71	75
INT3	95	90
INT4	94	79

H1: The after survey (awareness) is higher.
H2: The before survey (awareness) is higher.

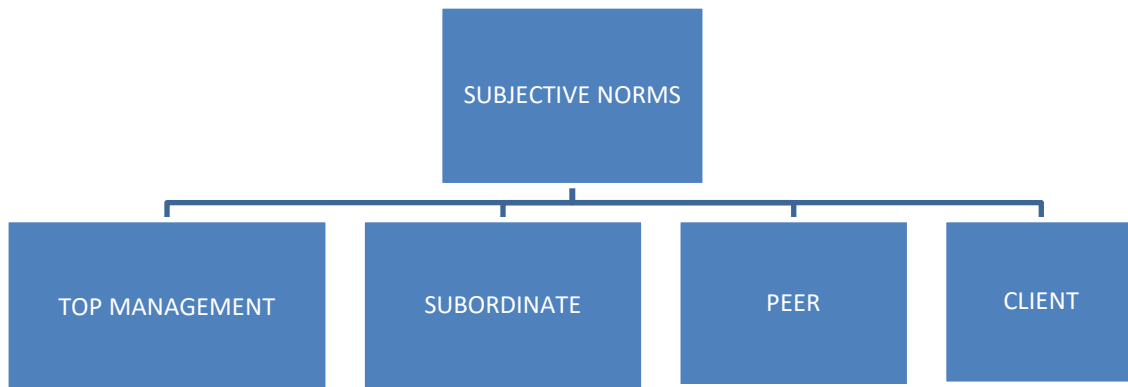Here in this study we use theory of planned behaviour of Ajzen, further to which we have applied the concept of Human resources as Subjective Norms can be further classified as:

Top Management

Subordinate

Peer

Client

III. MODEL FIT SUMMARY

Table 1: CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	57	1142.399	132	.000	8.655

Table 2: Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta 2	TLI rho 2	CFI
Default model	.859	.818	.874	.836	.873

Table 3: Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.772	.663	.674

Table 4: NCP

Model	NCP	LO 90	HI 90
Default model	1010.399	906.154	1122.091

Table 5: FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	2.147	1.899	1.703	2.109

Table 6: RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.120	.114	.126	.000

Hence the model is fit for Ajzen's Theory of Planned Behaviour concept (Pilot Study). This is done with the help of Amos.
The model fits data using fit indices.
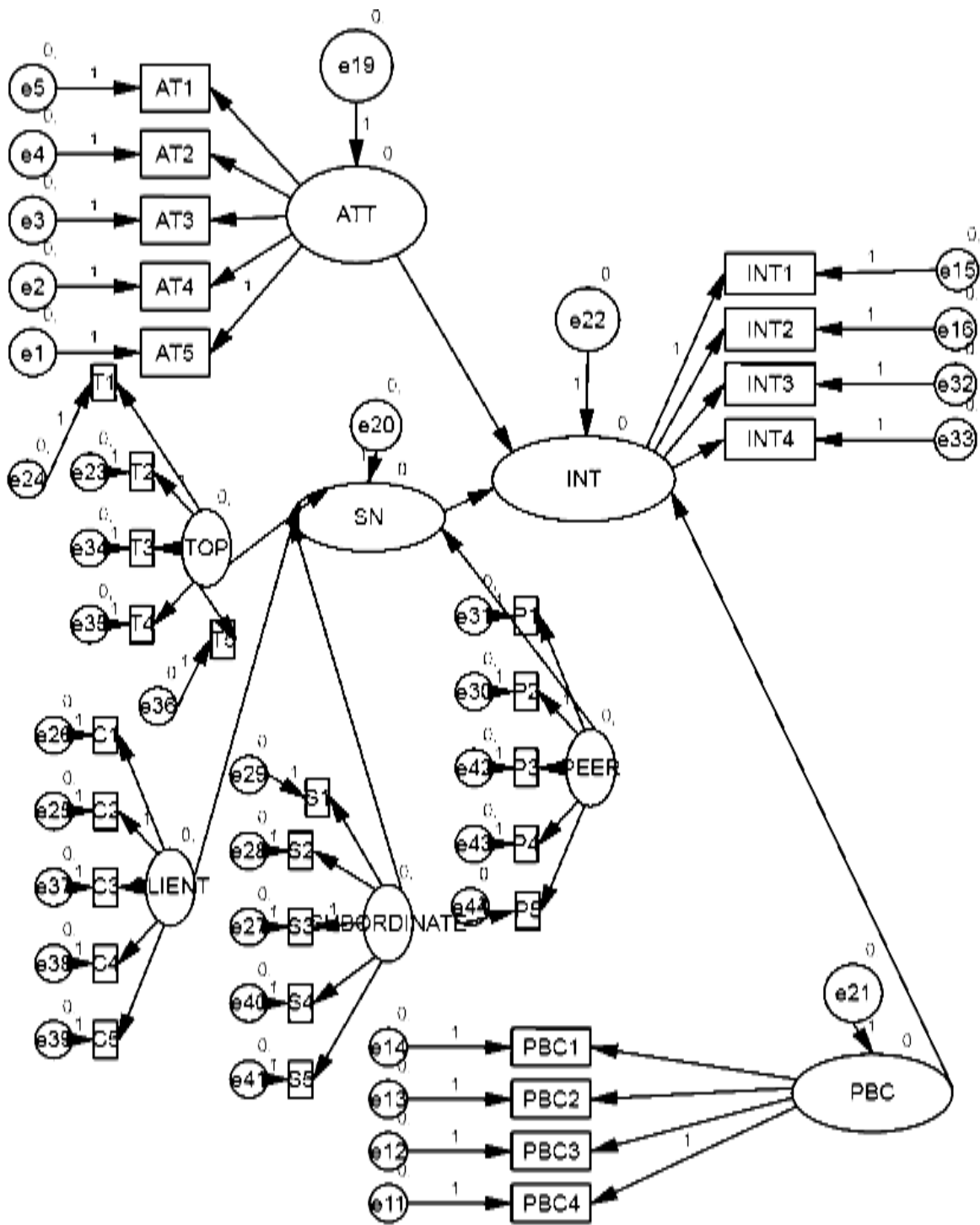
Figure 3: Modified Model

Proposed Model: Will be focused in further study.

IV. Sample and Data Collection

A total of 500 questionnaires were administered out of which 400 was answered.

The questionnaires had a cover letter briefing about the aim of this study. The same were administered both before and after the survey- considered as awareness created.

V. Measurement Development

The measures used in the research model were mainly adopted from some of the precedent related studies with minor statement changes, adapting to the college faculty knowledge sharing context. In order to increase the accuracy of measurement, a multi-item method was used and each item was based on a five point Likert scale. Such as, the items were measured on a 5-point Likert scale; ranging from

1 = Strongly Disagree,
2= Disagree,
3 = Neither Agree nor Disagree
4 = Agree and
5 = Strongly Agree.

Table 1: One-Sample Test-T

Test Value = 0						
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
AT1	72.852	399	.000	3.898	3.79	4.00
AT2	79.359	399	.000	4.100	4.00	4.20
AT3	70.286	399	.000	3.992	3.88	4.10
AT4	64.473	399	.000	3.900	3.78	4.02
AT5	39.608	399	.000	2.760	2.62	2.90
S1	44.594	399	.000	3.388	3.24	3.54
S2	39.104	399	.000	2.775	2.64	2.91
S3	42.788	399	.000	3.110	2.97	3.25
S4	91.292	399	.000	3.712	3.63	3.79
S5	102.873	399	.000	3.778	3.71	3.85
T1	53.374	399	.000	3.185	3.07	3.30
T2	58.575	399	.000	3.780	3.65	3.91
T3	64.428	399	.000	3.545	3.44	3.65
T4	55.503	399	.000	3.115	3.00	3.23
T5	124.078	399	.000	4.625	4.55	4.70
C1	63.318	399	.000	3.855	3.74	3.97
C2	57.274	399	.000	3.708	3.58	3.83
C3	30.557	399	.000	1.850	1.73	1.97
C4	44.951	399	.000	2.028	1.94	2.12
C5	91.292	399	.000	3.712	3.63	3.79
P1	52.667	399	.000	3.172	3.05	3.29
P2	52.320	399	.000	3.175	3.06	3.29
P3	94.360	399	.000	3.920	3.84	4.00
P4	92.636	399	.000	3.885	3.80	3.97
P5	91.211	399	.000	3.832	3.75	3.92
PBC1	51.186	399	.000	3.172	3.05	3.29
PBC2	41.646	399	.000	2.668	2.54	2.79
PBC3	96.514	399	.000	4.202	4.12	4.29
PBC4	95.847	399	.000	4.205	4.12	4.29
INT1	68.371	399	.000	3.472	3.37	3.57
INT2	71.904	399	.000	3.480	3.38	3.58
INT3	63.318	399	.000	3.855	3.74	3.97
INT4	57.274	399	.000	3.708	3.58	3.83

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Table 2: Attitude

Tavg

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	80	20.0	20.0	20.0
	1.00	5	1.3	1.3	21.3
	2.00	27	6.8	6.8	28.0
	3.00	97	24.3	24.3	52.3
	4.00	140	35.0	35.0	87.3
	5.00	51	12.8	12.8	100.0
	Total	400	100.0	100.0	

The maximum percent weightage falls on 3rd question and minimum percent is in the first question.
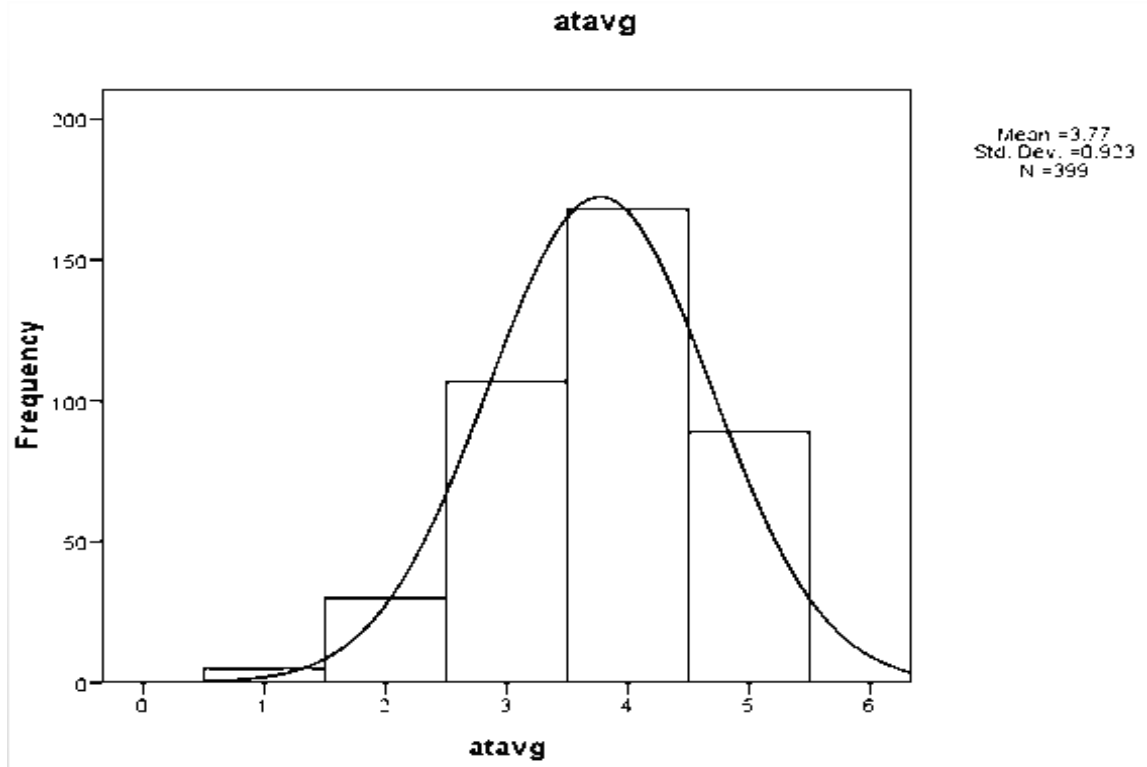

Figure 4: Attitude

a) *Attitude towards knowledge sharing is good and valuable*

Table 3: Subordinate

Savg

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.2	.2	.2
	2	80	20.0	20.0	20.2
	3	250	62.5	62.5	82.8
	4	64	16.0	16.0	98.8
	5	5	1.2	1.2	100.0
	Total	400	100.0	100.0	

The maximum percent weightage falls on 3rd question and minimum percent is in the first question.
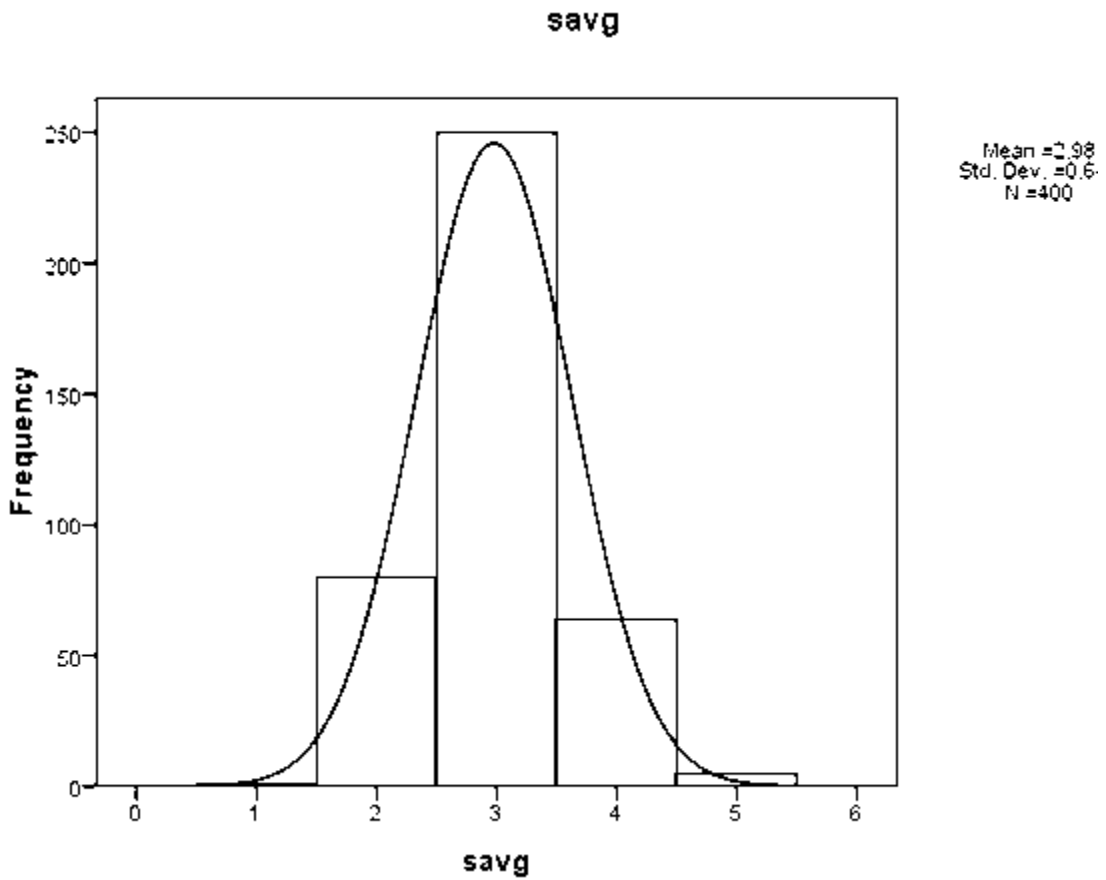
Figure 5: Suborditinate

Table 4: Top Mgt

|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	80	20.0	20.0	20.0
	1.40	1	.3	.3	20.3
	1.60	1	.3	.3	20.5
	1.80	11	2.8	2.8	23.3
	2.00	6	1.5	1.5	24.8
	2.20	19	4.8	4.8	29.5
	2.40	26	6.5	6.5	36.0
	2.60	28	7.0	7.0	43.0
	2.80	29	7.2	7.2	50.2
	3.00	46	11.5	11.5	61.8
	3.20	39	9.8	9.8	71.5
	3.40	59	14.8	14.8	86.3
	3.60	13	3.3	3.3	89.5
	3.80	11	2.8	2.8	92.3
	4.00	10	2.5	2.5	94.8
	4.20	11	2.8	2.8	97.5
	4.40	5	1.3	1.3	98.8
	4.60	3	.8	.8	99.5
	4.80	2	.5	.5	100.0
	Total	400	100.0	100.0	

tavg

Mean =3.62
Std. Dev. =0.622
N =400
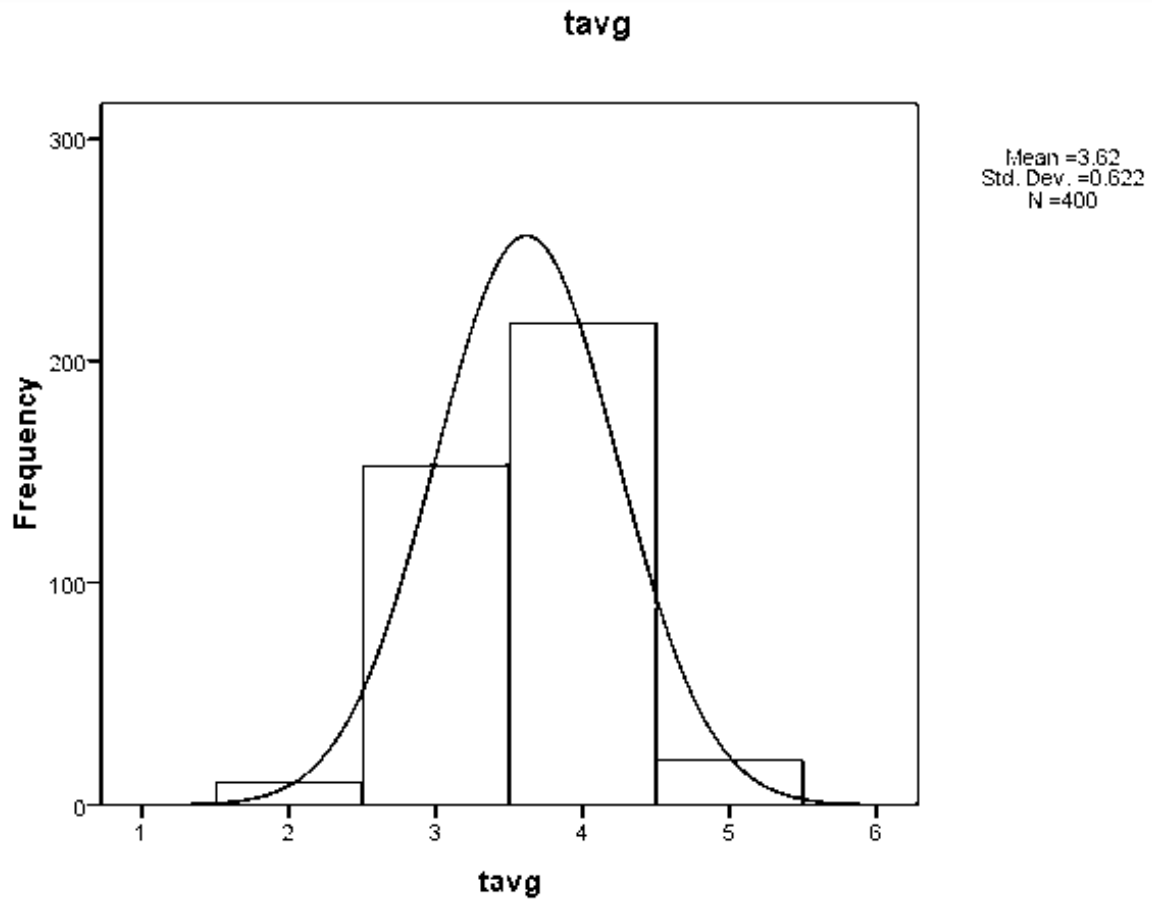
Figure 6: Top Management

The average shows that the 3rd and 4th i.e. 3.5 element has more frequency which means that faculty are ready to share knowledge in the Top Management.

The maximum percent weightage falls on 3rd question and minimum percent is in the first question.

Table 5: Client

Cavg

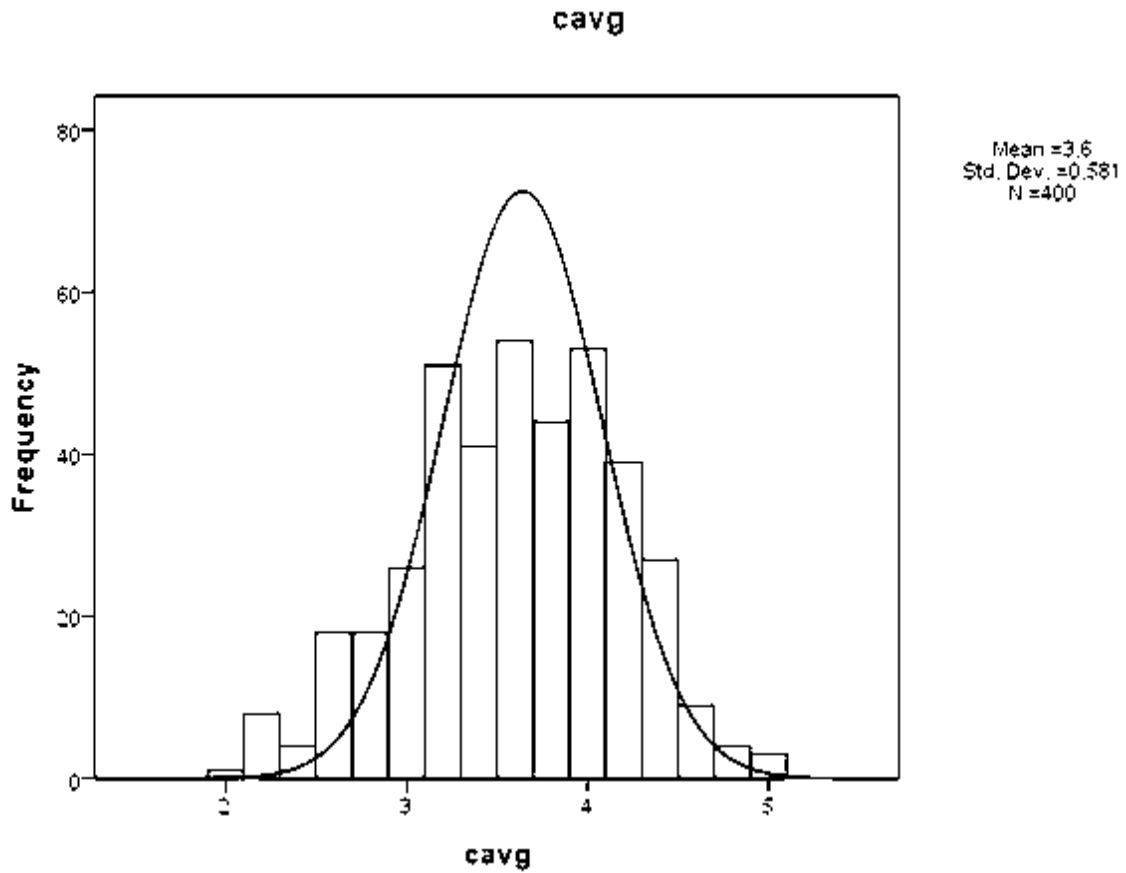|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	80	20.0	20.0	20.0
	2.00	1	.3	.3	20.3
	2.20	6	1.5	1.5	21.8
	2.40	4	1.0	1.0	22.8
	2.60	16	4.0	4.0	26.8
	2.80	14	3.5	3.5	30.3
	3.00	21	5.3	5.3	35.5
	3.20	42	10.5	10.5	46.0
	3.40	33	8.3	8.3	54.3
	3.60	42	10.5	10.5	64.8
	3.80	35	8.8	8.8	73.5
	4.00	41	10.3	10.3	83.8
	4.20	32	8.0	8.0	91.8
	4.40	22	5.5	5.5	97.3
	4.60	6	1.5	1.5	98.8
	4.80	3	.8	.8	99.5
	5.00	2	.5	.5	100.0
	Total	400	100.0	100.0	

Figure 7: Client Average

The maximum percent weightage falls on 3rd question and minimum percent is in the first question.

Table 6: PBC Avg

Pbcavg

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	80	20.0	20.0	20.0
	1.50	2	.5	.5	20.5
	1.75	5	1.3	1.3	21.8
	2.00	7	1.8	1.8	23.5
	2.25	9	2.3	2.3	25.8
	2.50	14	3.5	3.5	29.3
	2.75	17	4.3	4.3	33.5
	3.00	35	8.8	8.8	42.3
	3.25	31	7.8	7.8	50.0
	3.50	43	10.8	10.8	60.8
	3.75	40	10.0	10.0	70.8
	4.00	48	12.0	12.0	82.8
	4.25	24	6.0	6.0	88.8
	4.50	24	6.0	6.0	94.8
	4.75	16	4.0	4.0	98.8
	5.00	5	1.3	1.3	100.0
	Total	400	100.0	100.0	

The maximum percent weightage falls on 3rd question and minimum percent is in the first question.
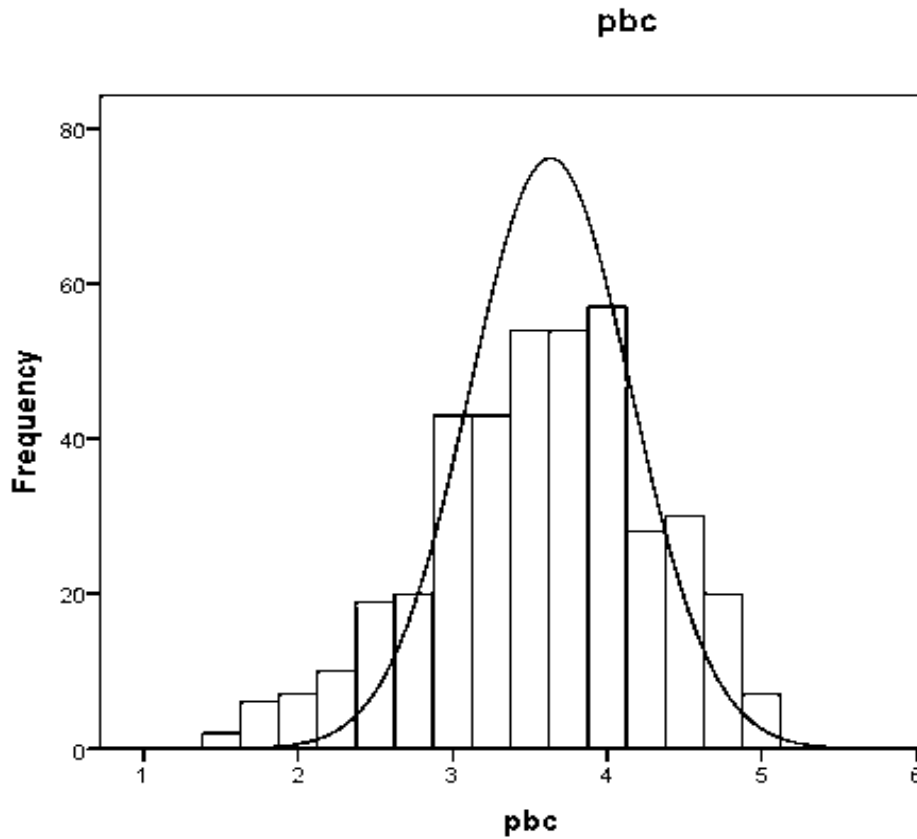
pbc

Figure 8: Perceived Behavioral Control Average

The Attitude average shows that the 4th element has more frequency which means that it is very valuable to share knowledge.

Table 7: Intention

Int

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.25	2	.5	.5	.5
	1.5	2	.5	.5	1.0
	1.75	6	1.5	1.5	2.5
	2	8	2.0	2.0	4.5
	2.25	16	4.0	4.0	8.5
	2.5	21	5.2	5.2	13.8
	2.75	27	6.8	6.8	20.5
	3	43	10.8	10.8	31.2
	3.25	33	8.2	8.2	39.5
	3.5	36	9.0	9.0	48.5
	3.75	28	7.0	7.0	55.5
	4	46	11.5	11.5	67.0
	4.25	41	10.2	10.2	77.2
	4.5	33	8.2	8.2	85.5
	4.75	29	7.2	7.2	92.8
	5	29	7.2	7.2	100.0
	Total	400	100.0	100.0	

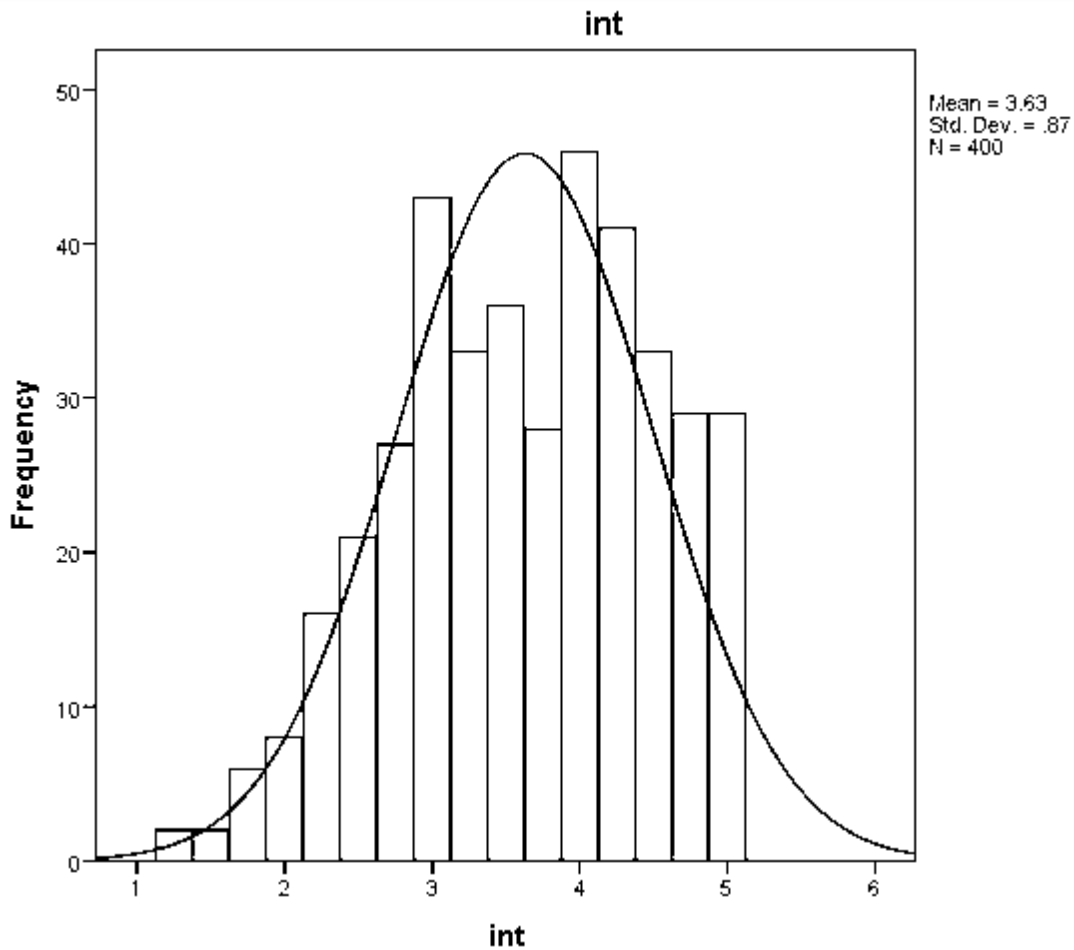The maximum percent weightage falls on 3 question and minimum percent is in the first question.

Figure 9: Intention Average

The Intention average shows that the 4th element has more frequency which means that it is very valuable to share knowledge.

VI.   PATH COEFFICIENTS AND CONCLUSIONS

Table 5: Significance and strengths of individual paths

Path Coefficient	Model 1 (Theory of Planned Behavior)	Model 2
AT → IN	0.21	0.10
SN → IN	0.21	0.70
PBC → IN	0.2	0.75

The path coefficients were tested for significance level of 0.01.

The path coefficients from attitude to intention and subjective norms to behavioral intention were noteworthy for all the models. After model seems to be more convincing thus the analysis is proved.

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APPENDIX A.

Knowledge Sharing in Physicians

Age: Gender:

Highest Qualification: Department:

Position: Years of Experience with UG:

Organization Name:

Years of Experience with PG:

Organization Type: Govt./Private

If Government : State/ Central

If Private: Self-Financing / Non Self – Financing

 Questionnaire Items

Construct Items

Intentions to share knowledge(IN:4 items)

I always will

IN1: ...plan to share knowledge with my colleague

IN2: ...try to share knowledge with my colleague

IN3: ...make an effort to share knowledge with my colleague

IN4: ...intend to share knowledge with my colleague, if they ask

Attitude toward knowledge sharing (AT: 5 items)

If I share my knowledge with other physicians, I feel

AT1: very harmful..........very beneficial

AT2: very unpleasant.....very pleasant

AT3: very bad.................very good

AT4: very worthless.......very valuable

AT5: very unenjoyable....very enjoyable

Subjective norms (SN: 5 items)

SN1: It is expected of me that I share knowledge with other physicians.

Most physicians who are important to me

SN2: ...think that I should share knowledge with other physicians.

SN3: ...share their knowledge with others physicians whose opinions I value

SN4: ...would approve of my behavior to share knowledge with other physicians.

SN5: ...share their knowledge with others

Perceived behavioral control (PBC: 4 items)

PBC1: For me to share my knowledge is possible always

PBC2: If I want, I always could share knowledge

PBC3: It is mostly up to me whether or not I share knowledge

PBC4: I believe that there are much control I have to share my knowledge with other physicians.

Most physicians who are important to me

SN2: ...think that I should share knowledge with other physicians.

SN3: ...share their knowledge with others physicians whose opinions I value.

SN4: ...would approve of my behavior to share knowledge with other physicians.

SN5: ...share their knowledge with others-this is further as

- ➢ Top Management
- ➢ Subordinate
- ➢ Peer
- ➢ Client

Perceived behavioral control (PBC: 4 items)

PBC1: For me to share my knowledge is possible always.

PBC2: If I want, I always could share knowledge.

PBC3: It is mostly up to me whether or not I share knowledge.

PBC4: I believe that there are much control I have to share my knowledge with other physicians.

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