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Parents Assessment of Physician's Mindful Practice

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Abstract

This study aims to assess parental perceptions of physician mindfulness in their daily practice in the Indian context. After conducting an in-depth analysis of the existing publications, literature, physicians' mindfulness was assessed by administering the MAAS questionnaire, and parental perceptions were evaluated using the 21-item general communication subscale of the Personal Processes of Care Instrument. The MAAS was selected for its extensive use and validated efficacy in measuring mindfulness, particularly on moment-to-moment awareness of self-related experiences. This study involved 40 paediatricians and 40 parents, sampled conveniently, to assess internal consistency, covariate analysis, and descriptive statistics. Mindfulness was analysed via chi-square tests, while parental perceptions were examined through t-tests; both executed using Microsoft Excel 2011. Our analysis revealed that paediatricians, regardless of age or gender, demonstrated mindfulness. From the parents' perspective, there are significant areas for improvement, particularly in the physicians' explanations of diagnosis, medications, and responsiveness to parents' concerns. Additionally, addressing disrespectful behaviour by clinic assistants toward the parents emerged as a primary concern, highlighting the need for efforts toward improvement. Our research underscores the critical importance of mindfulness in paediatric practice and identifies key areas for improvement to enhance trust in physician-patient-centred disease management. It scrutinized the effects of physicians' mindfulness on parental satisfaction during their child's medical condition consultations. The findings have further deepened our comprehension of mindfulness's pivotal role and impact on well-being, ultimately seeking to expedite the healing process among children while nurturing positive engagements with physicians and clinic staff.

Keywords: Mindfulness, Paediatrician's Behaviour, Parents, Satisfaction.

Introduction

Studies showed that mindfulness originated in Buddhism, whose primary objective was to enable a person to identify and recognize human suffering and address it by inculcating the habit of living in the present moment (1). This paved the way for integrating mindfulness with modern medicine as it is based on non-judgmental, curious, and self-compassionate awareness of one's immediate experiences (2). This involves actively directing attention towards cognitive events such as sensations, thoughts, and emotions (3). Research studies have demonstrated that mindfulness entails a non-judgmental stance towards these mental phenomena, acknowledging and accepting them as they are, without attachment or aversion. Recent research indicated a growing interest in traditional mindfulness practices, including yoga, tai chi, prayer, and chanting, all constituting forms of meditation (4). As defined mindfulness is living in the present moment, characterized by the ability to regulate attention toward immediate experiences. Mindfulness meditation, embodying physical stillness, gained prominence in the West through its incorporation into Mindfulness-Based Stress Reduction (MBSR) therapy (2, 5). This secular approach utilizes meditation practices to cultivate mindfulness, yielding remarkable outcomes such as chronic pain management. Consequently, researchers worldwide are increasingly investigating mindfulness's effects on human psychology and physiology, spurred by its potential to enhance well-being. Based on two models, comprising the ancient 2500-year-old Buddhist model which promotes mindfulness through meditation, followed by the modern model with four decades of experience and proposed by Kabat-Zinn, which primarily focuses on Mindfulness-Based Stress Reduction (MBSR) program. Both aim to reduce suffering and improve relationships. Mindfulness extends beyond simple attention-focused practices to

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include a significant component of psycho education (2). Research has shown that educating self-awareness constitutes an important part of mindfulness interventions as it helps individuals understand their internal thought processes and behaviours, thereby normalizing their experiences. By incorporating psycho educational elements, mindfulness interventions provide a comprehensive approach to understanding and managing one's inner life, enhancing overall well-being and psychological resilience. Research has consistently showcased the advantageous outcomes of integrating mindfulness practices into one's daily routine over a specified duration. This deliberate incorporation fosters emotional equilibrium and imbues life with deeper meaning, underpinned by a sense of compassion and care. By cultivating mindfulness regularly, individuals can navigate life's challenges with greater resilience and find fulfilment in their personal and interpersonal experiences. This scientific understanding underscores the transformative potential of mindfulness in promoting holistic well-being and enriching the human being. In medicine, Mindfulness-based interventions have gained momentum over the years due to their beneficial effects. A multicentric study involving 45 cancer specialists demonstrated that heightened mindedness among physicians positively correlated with enhanced patient-physician interactions, particularly regarding medication, dosage, and patient concern, which will lead to improved QoL for patients (6). Research showed that physicians were subjected to experience interventions based on both mindfulness and compassion, resulting in physician well-being and beliefs with improved communication and care delivery, consequently enhancing patient adherence (7, 8). The first systematic review and meta-analysis conducted in 2021 involving 925 physicians has demonstrated the reduction in stress and burnout in the mindfulness intervention group over the other groups thereby improving mindfulness among physicians (9). Most importantly, researchers demonstrated the utility of mindfulness-based interventions among physicians for improving cognition, attention, working memory, and patient practice along with their mental and overall improvement in well-being (10-12). From an Indian perspective, mindfulness-based therapies improved sleep and depression among physicians followed by alleviating pain in menopausal women and mitigating anxiety and distress in GERD patients. This highlights the multifaceted role of mindfulness along with the diverse applications of mindfulness among healthcare professionals (13-17). In today's evidence-based medicine medical world, the relationship between physicians and patients is crucial for effective treatment. While physicians stay updated on the latest medical knowledge, they also face personal challenges like stress and burnout (18). They need to take care of themselves too. By learning about mindfulness and finding balance in their lives, physicians can not only look after themselves better but also be better helpers to their patients, offering practical solutions and support. Although the theoretical advantages of mindfulness for physicians' work, well-being, and patient outcomes exist, these relationships have not been empirically examined within the Indian setting. This study aims to evaluate how parents perceive the mindfulness of physicians during the consultation period in terms of communication of diagnosis and dosage, followed by the quality of service given to their child. We hypothesized that a physician with mindfulness would be associated with higher-quality interpersonal care.

Methodology

We targeted paediatricians from 3 cites of Bihar namely, Patna, Muzaffarpur and Darbhanga. The universe size of 240 arrived as 240 paediatricians were registered with local Indian Academy of Paediatrics chapter. From the universe, the sample size was determined by using below equation no-1, for accurate and reliable findings (19).

$$n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2 \cdot (N-1) + z^2 \cdot p \cdot q} \quad [1]$$

N = 240, z= 1.96, e = 0.05, p = 50% (In the survey it is almost safest to stick with 50% distribution) that is 0.5, q = (1 – p) = (1 – 0.5) = 0.5, n= 230/ (0.6+0.96) =230/1.56 =147. However, for this observational study, the study has been conducted with 40 paediatricians and 40 Parents. Based on the pilot study result, final study would be continued with the calculated sample size. The main objective was to assess the physician's mindfulness towards the child during the moments of consultation. These physicians from

the state of Bihar belonging to the cities of Patna, Muzaffarpur, and Darbhanga were randomly selected for an intriguing observational study. These seasoned professionals, boasting up to 20 years of experience, opened the doors of their clinics to delve into the enigmatic realm of paediatrician-patient interactions. All the physicians were assessed for mindfulness by administering the MAAS scale as it focuses on self-awareness and the preferred scale over the other existing scales in the presence of parent-reported dependent variable assessing their perception of clinician's communication and overall satisfaction about the consultation duration with the help of PPCI general communication subscale with 21 items. MASS assessment is based on a 6-point Likert scale where No-1 implies "Almost always" and No-6 represents "Rarely". Similarly, the PPCL general communication subscale is also based on a 6-point Likert scale where No-1 represents "Never" and No-6 represents "Always". For reference, sample questionnaire has been attached. Data Analysis for this study consisted of performing descriptive statistics followed by the test for central tendency. Since the data exists in a non-normal distribution of scores, T-test and $\chi 2$ tests for categorical variables to test for differences in the child's parents and physician characteristics (covariates) by clinician mindfulness. Statistical Tools for Analysis were initiated with descriptive statistics to explore and describe key characteristics of our study participants. This analysis allowed us to gain insight into the distribution, means, and internal consistencies of the mindfulness scale utilized. Given the non-normal distribution of scores, we adopted a tertile approach, dividing the mindfulness variable into low, medium, and high categories. This ensured that we could still effectively examine graded associations despite the skewed distribution. Analysis was performed using MS Tools. The Personal Processes of Care Instrument questions were grouped against the individual heading to represent the variable. The same will be converted into an aggregate variable from the questions break-up as shown in the below Table 1 for carrying out the analysis.

Table 1: PPC Instrument Questions Break-up

Variable	Hurried Communication	Elicited Concerned Responses	Explained Results and Medication	Decision Making	Interpersonal Style, Compassionate Respectful	Discrimination	Disrespectful Staff
Q. No	1,2,3,19,20	21,22,23	24,25,26,27	28.29. 30,31	32/33/34/35	36,37,38, 39	40,41,42,43

Results

Mindfulness indicates an individual's independent -psychological state of awareness, attention, and remembrance based on neurological connections, which primarily process the received information leading to judgment. Test for internal consistency has been performed by calculating the Cronbach's Alpha value. Below Table 2 represents Cronbach`s Alpha values for both the variables 0.72 and 0.609 establishing the consistency and reliability of the Questionnaire.

Table 2: Internal Consistency for Both the Variables

Serial No	Sample Details	Cronbach Alpha
1	Physician's Responses MAAS scale	0.72
2	PPC Instrument	0.609

As per the earlier reference, an item is considered reliable with Cronbach's alpha score greater than 0.6, acceptable between 0.6 to 0.8, and with a corrected item-total correlation greater than 0.3. Further data analysis was done in MS tools (20). Descriptive Statistical analysis has been performed to present the sample size characteristics in the form of frequency tables and charts, as shown below. Demographics Analysis demonstrates the location of physicians across various geographic locations namely city, town, and rural places as shown in the below Figure 1, Geographical distribution of the sample.

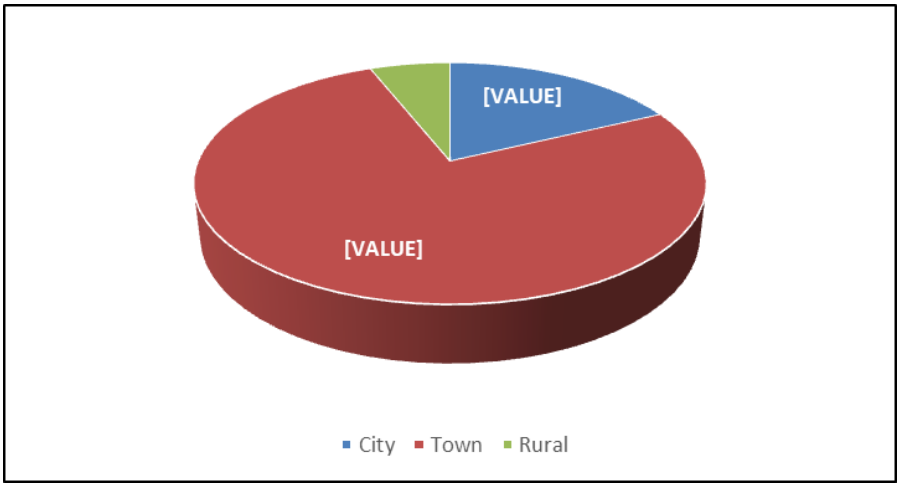

Figure 1: Geographical Distribution of the Paediatricians

Figure 1 demonstrates the selection of physicians spread across three geographies led by towns with 76% of physicians followed by 18% of physicians from cities and 6% of physicians from rural places. Figure 2 below depicts the physician's gender wise break-up with respect to their participation indicated 74% male and 24% female paediatricians in the study sample. Figure 3 below depicted the physician's experience profile analysis, indicating that 42% paediatricians to have up to 5 years of experience, 30% of paediatricians have up to 10 years of experience and 25% of paediatricians have more than 20 years of experience, that represented the study sample.

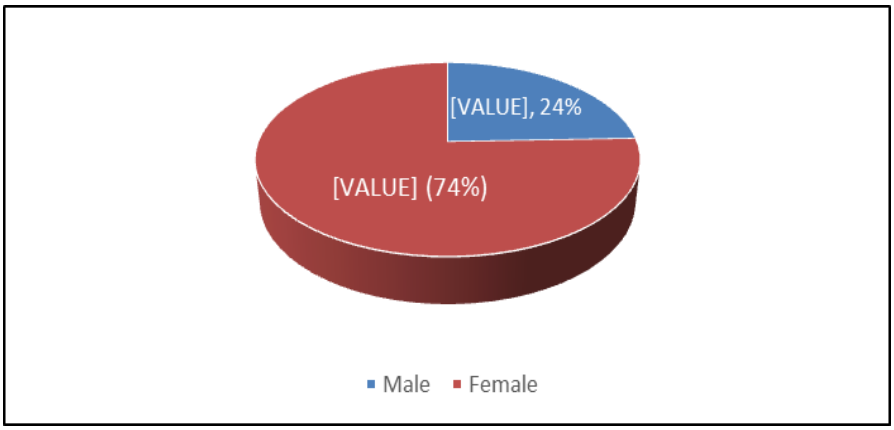

Figure 2: Gender Wise Distribution of the Paediatricians

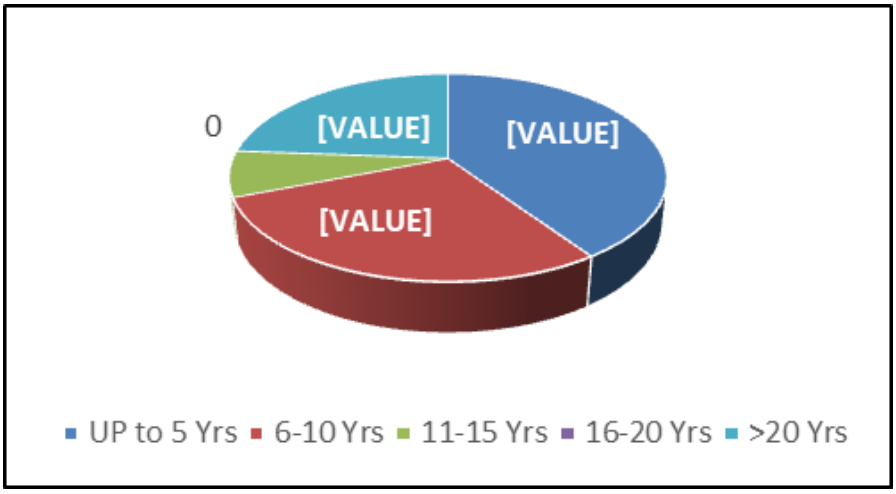

Figure 3: Paediatricians Experience Profile Analysis

Table 3: Characteristics of the Sample Comprising of Paediatricians and Parents

Location	Location	Experience
2	Mean	3
0.09	Standard Error	0.2
2	Median	2
2	Mode	1
0.67	Standard Deviation	1.7
0.45	Sample Variance	2.7
-0.69	Kurtosis	-1.4
-0.02	Skewness	0.5
2	Range	4
1	Minimum	1
3	Maximum	5
105	Sum	137
52	Count	52
3	Largest (2)	5
1	Smallest (2)	1
0.187	Confidence Level (95.0%)	0.461

As shown in the above Table 3, the characteristics of the sample comprising of paediatricians and parents, represented the town as the location with an average experience of minimum 10 years in the clinical practice. As shown in the below Table 4 covariance analysis has been performed demonstrating the positive covariance between most of the variables (13 variables) is 0.944 while the covariance between 3 variables (JNP) was found to vary between positive and negative, indicating both relationships, concluding a negative relationship.

Table 4: Covariant Analysis of the Sample Paediatricians

	D	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
D	0.139															
F	0.012	1.849														
G	0.024	0.391	0.578													
H	0.083	0.566	0.092	1.311												
I	0.063	0.357	0.143	0.929	2.651											
J	-0.012	0.379	-0.065	0.770	1.524	3.066										
K	0.030	0.136	-0.056	0.490	-0.071	0.302	1.436									
L	0.008	0.259	0.252	0.374	0.302	0.966	0.243	1.249								
M	0.004	0.274	-0.048	0.488	0.389	0.345	0.205	0.254	0.758							
N	-0.004	0.352	0.044	0.430	0.611	0.318	-0.057	0.001	0.147	2.152						
O	0.087	0.211	0.156	0.279	0.294	0.252	0.030	0.424	-0.111	0.247	1.440					
P	-0.004	0.264	-0.007	0.253	1.063	0.219	-0.231	-0.077	0.171	0.785	0.002	1.289				
Q	0.056	-0.082	-0.031	-0.306	-0.103	0.231	0.045	-0.196	-0.008	-0.346	-0.045	-0.080	1.610			
R	0.000	-0.190	-0.024	0.619	0.405	0.976	0.113	0.476	0.119	0.429	0.262	0.119	0.524	2.048		
S	0.079	0.299	0.207	0.241	0.468	0.446	0.240	0.137	-0.079	0.178	0.526	0.205	0.467	0.357	1.848	
T	0.012	0.087	-0.156	0.090	-0.048	0.236	0.128	-0.241	-0.083	0.328	0.116	0.216	0.228	0.143	0.490	0.944

Hypothesis Testing has been carried out to assess the Impact of paediatrician's mindfulness w.r.t experience ranging from 1 to 10 years of clinical experience done using Chi-Square Test. Null Hypothesis: There is no impact of experience (1 to 10 years) on the mindful state of physicians during their clinical practice. Alternative Hypothesis: There is an impact of experience (1 to 10 years) on the mindful state of physicians during their clinical practice. As shown in the below Table 5, information pertaining to expected values from the sample derived. As shown in the below Table 6, information pertaining to observed vales from the sample derived. As shown in the below Table 7, degree of the freedom has been calculated towards ensuring valid Chi-Square. As shown in the below Table 8, Chi-Square test value along with degrees of freedom and the level of significance were calculated.

Table 5: Frequency of the Expected Values

Expected																	
PS	**C**	**D**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**
Male	1	1	4	6	5	5	4	4	4	5	5	5	5	6	5	6	6
Female	1	1	4	5	4	4	4	4	5	5	4	5	5	5	4	5	5
Total	3	3	8	11	10	9	8	9	9	10	9	10	10	11	9	11	11

Table 6: Frequency of the Observed Values

Observed																	
PS	**C**	**D**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**
Male	0.631	1	2	3	3	3	2	2	2	3	2.7	3	3	2.9	3	1	3
Female	1.4583	1	2	3	2	2	2	2	2	2	1.9	2	2	2.6	2	2	3

Table 7: Degree of Freedom derived from the Values

$(O-e)^2/E$																
	D	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**
Male	0.2698	0	1	1	1	1	1	1	1	1	1.2	1	1	1.3	1	5
Female	0	0	1	1	1	1	1	1	1	1	1.1	1	1	1.5	1	1

Table 8: Chi-Square Test Values

Chi-Square Test	36.993
df	15.000
P	0.001

As shown in the above Table 8, the Null hypothesis is rejected to accept the alternative hypothesis, which demonstrates the presence of a significant impact of paediatrician's experience on their mindfulness in their clinical practice. To conclude paediatrician's experience (1 to 10 years) has a significant impact on their mindful state of during clinical practice. The impact of paediatrician's mindfulness w.r.t their clinical experience ranging from 11 - 19 years using Chi-Square Test for HCPs as demonstrated below. Null Hypothesis: There is no impact of physicians' experience ranging between 11 years to 20 years on their mindful state during their clinical practice. Alternative Hypothesis: A physician's experience ranging between 11 years to 20 years impacts their mindful state during their clinical practice. As shown in the below Table 9, information pertaining to expected vales from the sample derived. As shown in the below Table 10, information pertaining to observed vales from the sample derived. As shown in the below Table 11, degree of the freedom has been calculated towards ensuring valid Chi-Square. As shown in the below Table 12, Chi-Square test value along with degrees of freedom and the level of significance were calculated.

Table 9: Frequency of the Expected Values

PS	B	C	D	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
HCP	1	3	1	3	5	6	4	5	6	6	6	4	6	4	4	4	5	6
Female	2	3	1	4	6	4	2	4	4	4	4	4	6	4	6	2	6	6

Table 10: Frequency of the observed Values

PS	B	C	D	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Male	0.5	1.6	0.5	1.6	2.7	3.2	2.1	2.7	3.2	3.2	3.2	2.1	3.2	2.1	2.1	2.1	2.7	3.2
Female	0.9	1.4	0.5	1.9	2.6	1.6	0.9	1.6	1.9	1.9	1.9	1.6	2.8	1.6	2.8	0.9	2.8	2.8

Table 11: Degree of Freedom derived from the Values

$(O-e)^2$ /E	B	D	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Male	0.4	1	0.4	1.2	2	2.5	1.6	2.1	2.5	2.5	2.5	2	2.5	2	1.6	2	2.1
Female	1.2	2	0.6	2.4	3	2.1	1.2	2.1	2.4	2.4	2.4	2	3.6	2	3.6	1	3.6

Table 12: Chi-Square Test Values

Chi-Square Test	68
df	15.000
P	0.00

As shown in the above Table 12, the Null hypothesis is rejected to accept the alternative hypothesis, which demonstrates the presence of a significant impact of paediatrician's experience on their mindfulness in their clinical practice. To conclude paediatrician's experience (10 to 20 years) has a significant impact on their mindful state of during clinical practice. Impact of paediatrician's mindfulness w.r.t their clinical experience of more than 20 years using Chi-Square Test. Null Hypothesis: There is no impact of physicians' 2 decades of experience on their mindful state during their clinical practice.

Alternative Hypothesis: There is an impact of physicians' 2 decades of experience on their mindful state during their clinical practice. As shown in the below Table 13, information pertaining to expected vales from the sample derived. As shown in the below Table 14, information pertaining to observed vales from the sample derived. As shown in the below Table 15, degree of the freedom has been calculated towards ensuring valid Chi-Square. As shown in the below Table 16, Chi-Square test value along with degrees of freedom and the level of significance were calculated.

Table 13: Frequency of the Expected Values

PS	B	C	D	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
HCP	1	3	1	3	5	6	4	5	6	6	6	4	6	4	4	4	5	6
Female	2	3	1	4	6	4	2	4	4	4	4	4	6	4	6	2	6	6

Table 14: Frequency of the Observed Values

PS	B	C	D	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Male	0.5	1.6	0.5	1.6	2.7	3.2	2.1	2.7	3.2	3.2	3.2	2.1	3.2	2.1	2.1	2.1	2.7	3.2
Female	0.9	1.4	0.5	1.9	2.6	1.6	0.9	1.6	1.9	1.9	1.9	1.6	2.8	1.6	2.8	0.9	2.8	2.8

Table 15: Degree of Freedom Derived from the Values

$(O-e)^2/E$	B	D	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Male	0.4	1	0.4	1.2	2	2.5	1.6	2.1	2.5	2.5	2.5	2	2.5	2	1.6	2	2.1
Female	1.2	2	0.6	2.4	3	2.1	1.2	2.1	2.4	2.4	2.4	2	3.6	2	3.6	1	3.6

Table 16: Chi-Square Test Values

Chi-Square Test	38.53
df	15.000
P	0.001

As shown in the above Table 16, the Null hypothesis is rejected to accept the alternative hypothesis, which demonstrates the presence of a significant impact of paediatrician's experience on their mindfulness in their clinical practice. To conclude paediatrician's experienced more than 20 years, have a significant impact on their mindful state of during clinical practice. The conclude from the above three Chi-square tests, confirms a significant impact of paediatrician's mindfulness with gain of experience. Impact of paediatrician's Hurried Communication with patients on their mindfulness during clinical Practice has been assessed by performing T-Test for Hurried Communication (HC) post hypothesis formulation. The details of the results are depicted as in Table 17. Null Hypothesis: There is no influence of physicians' mindfulness on their hurried communication between patients and parents during the clinical consultation period. Alternative Hypothesis: There is a strong influence of physicians' mindfulness on their hurried communication between patients and parents during the clinical consultation period.

Table 17: T-Test for Hurried Communication with Respect to Paediatrician

t-Test: Paired Two Sample for Means	HCP	HC
Mean	4.3	2.06
Variance	0.360069444	0.222667
Observations	40	40
Pearson Correlation	0.277627957	
Hypothesized Mean Difference	0	
Df	9	
t Stat	10.85903288	
P(T<=t) one-tail	0.000	
t Critical one-tail	1.833112933	
P(T<=t) two-tail	0.00000179	
t Critical two-tail	2.262157163	

As shown above, in Table 17, P is statistically significant indicating the acceptance of alternative hypothesis and rejection of the NULL hypothesis. The results demonstrated a statistically significant influence of physicians' mindfulness w.r.t their hurried communication with the patient's parents owing mainly due to patient load, time scarcity, restricted working hours. As a result of paucity of time, paediatricians sometimes ignore parent's wish of answering to their questions in a mindful way. Impact of paediatrician's Explanation of results with patients on their mindfulness during clinical Practice (ECR) has been assessed by performing T-Test and post hypothesis formulation. The details of the results are depicted as in Table 18 as shown below. Null Hypothesis: There is no influence of physicians' mindfulness on their explanation of results and medications to be given to child patients being briefed to parents between patients and parents during the clinical consultation period. Alternative Hypothesis: There is a strong influence of physicians' mindfulness on their hurried communication between patients and parents during the clinical consultation period.

Table 18: T-Test for ECR with Respect to HCP (Physician)

t-Test: Paired Two Sample for Means	HCP	ECR
Mean	4.3	4.6
Variance	0.360069	0.933333
Observations	40	40
Pearson Correlation	-0.32503	
Hypothesized Mean diff	0	
df	9	
t Stat	-0.73406	
P(T<=t) one-tail	0.240799	
t Critical one-tail	1.833113	
P(T<=t) two-tail	0.481599	
t Critical two-tail	2.262157	

As shown above, Table 18, the P value is not statistically significant indicating the acceptance of the null hypothesis. The results do not show a statistically significant influence of physician's mindfulness w.r.t responding or attending to the concerns raised by the patient's parents. Physicians tend to go ahead with their decision that suits best to the patient for recovery without obtaining consent from the parents. Impact of paediatrician's Explanation of results and medication (ERM) with patients on their mindfulness during clinical Practice has been assessed by performing T-Test and post hypothesis formulation. The details of the results are depicted as in Table 19 as shown below. Null Hypothesis: There is no impact of physician's mindfulness on their explanation of results and medications to be given to child patients being briefed to parent's ion between patients and parents during the clinical consultation period. Alternative Hypothesis: There is a strong impact of physicians' mindfulness on their explanation of results and medications to be given to child patients being briefed to parent's ion between patients and parents during the clinical consultation period.

Performance of T-Test for Explained, Results, Medication (ERM)

Table 19: T-Test for ERM with Respect to Paediatricians

t-Test: Paired Two Sample for Means	HCP	ERM
Mean	4.3	3.2
Variance	0.360069	1.441667
Observations	40	40
Pearson Correlation	0.112289	
Hypothesized Mean Difference	0	
df	9	
t Stat	2.716314	
P(T<=t) one-tail	0.011875	
t Critical one-tail	1.833113	
P(T<=t) two-tail	0.023751	
t Critical two-tail	2.262157	

As shown above in Table 19, P is statistically significant leading to the rejection of the null hypothesis and the acceptance of the alternative hypothesis. The results show a physician's mindfulness concerning explaining the results and medication details to be administered by parents to the child during the consultation. This will help parents in getting better clarity regarding safety, efficacy, adverse events profile, and suggesting emergency plans, all aiming at early recovery of the child from the condition. Impact of paediatrician's Decision Making (DM) with patients on their mindfulness during clinical Practice has been assessed by performing T-Test and post hypothesis formulation. The details of the results are depicted as in Table 20 as shown below. Null Hypothesis: There is no impact of physicians' mindfulness on their decision-making

concerning the treatment. Alternative Hypothesis: There is a strong impact of physician's mindfulness on their decision concerning the treatment.

Performance of T-Test for Decision Making (DM)

Table 20: T-Test for DM with Respect to HCP (Physician)

t-Test: Paired Two Sample for Means	HCP	DM
Mean	4.3	2.55
Variance	0.360069	1.219444
Observations	40	40
Pearson Correlation	-0.06183	
Hypothesized Mean Difference	0	
df	9	
t Stat	4.293321	
P(T<=t) one-tail	0.001005	
t Critical one-tail	1.833113	
P(T<=t) two-tail	0.00201	
t Critical two-tail	2.262157	

As shown above, in Table 20, P is statistically significant indicating the rejection of the null hypothesis and acceptance of the alternative hypothesis. The results showed a statistically significant influence of physician's mindfulness concerning the decision-making of the treatment undertaken with the parent's confirmation about any medicine being taken, and any previous challenges while adhering to the medicines for planning out a patient-friendly disease treatment plan. Impact of paediatrician's compassion and respect (ISCR) for both patient and parents on their mindfulness during clinical Practice has been assessed by performing T-Test and post hypothesis formulation. The details of the results are depicted as in Table 21 as shown below. Null Hypothesis: There is no impact of physician's mindfulness in being compassionate and respectful with the patient's parents during the treatment. Alternative Hypothesis: There is an impact of physician's mindfulness in being compassionate and respectful with the patient's parents during the treatment.

Performance of T-Test for Interpersonal Style: Compassionate, Respectful (ISCR)

Table 21: T-Test for ISCR with Respect to Paediatricians

t-Test: Paired Two Sample for Means	HCP	ISCR
Mean	4.3	2.88
Variance	0.360069	2.944
Observations	40	40
Pearson Correlation	0.022663	
Hypothesized Mean Difference	0	
Df	9	
t Stat	2.488013	
P(T<=t) one-tail	0.017267	
t Critical one-tail	1.833113	
P(T<=t) two-tail	0.034534	
t Critical two-tail	2.262157	

As shown above in Table 21, P is statistically significant indicating the rejection of the null hypothesis and acceptance of the alternative hypothesis. The results show the influence of the physician's mindfulness of being compassionate and respectful with the patient's parent who builds trust and a bond leading to treatment adherence by the patient for their early recovery. Impact of paediatrician's Discrimination (DES) of either or both patient and parents on their mindfulness during clinical Practice has been assessed by performing T-Test and post

hypothesis formulation. The details of the results are depicted as in Table 22 as shown below. Null Hypothesis: There is no impact of the physician's mindfulness in discriminating against the patient's parents during the treatment. Alternative Hypothesis: There is an impact of the physician's mindfulness in discriminating against the patient's parents during the treatment.

Performance of T-Test for Discrimination (DES)

Table 22: T-Test for DES with Respect to HCP (Physician)

t-Test: Paired Two Sample for Means	HCP	DES
Mean	4.3	2.75
Variance	0.360069	1.569444
Observations	40	40
Pearson Correlation	-0.06236	
Hypothesized Mean Difference	0	
Df	9	
t Stat	3.445922	
P(T<=t) one-tail	0.003661	
t Critical one-tail	1.833113	
P(T<=t) two-tail	0.007322	
t Critical two-tail	2.262157	

As shown above in Table 22, P is significant indicating the rejection of the null hypothesis and acceptance of the alternative hypothesis. The results demonstrate the physician's mindfulness of discriminating against the patient's parents during the treatment. This is mainly based on parents' level of income, education level, and ethnicity, which play an important role in choosing the drug regime for treatment purposes. Impact of paediatrician's disrespectful staff (DRS) to either or both patient and parents on their mindfulness during clinical Practice has been assessed by performing T-Test and post hypothesis formulation. The details of the results are depicted as in Table 23 as shown below. Null Hypothesis: There is no impact of the physician's mindfulness w.r.t disrespectful staff who were contacted by the patient's parents for consultation. Alternative Hypothesis: There is an impact of physician's mindfulness w.r.t disrespectful staff who were contacted by the patient's parents for consultation.

Performance of T-Test for Disrespectful Staff (DRS)

Table 23: T-Test for DRS with Respect to HCP (Physician)

t-Test: Paired Two Sample for Means	HCP	DRS
Mean	4.3	2.025
Variance	0.36007	1.07569
Observations	40	40
Pearson Correlation	-0.0636	
Hypothesized Mean Difference	0	
df	9	
t Stat	5.84501	
P(T<=t) one-tail	0.00012	
t Critical one-tail	1.83311	
P(T<=t) two-tail	0.00025	
t Critical two-tail	2.26216	

As shown above, in Table 23, P is statistically significant indicating the rejection of the null hypothesis and acceptance of the alternative hypothesis. The findings underscore a critical aspect of physician mindfulness: its profound influence on mitigating instances of disrespectful behaviour often witnessed among parents of paediatric patients. Such conduct, whether it

pertains to attitude, information dissemination, or overall can significantly tarnish the reputation and deter future patient footfall. Addressing this issue is paramount, as it has implications both in the short term and long term to physician's practice.

Discussion

To our knowledge, this study is first from India, involving paediatricians as physicians, embarked on a profound exploration of paediatric care, delving into the intricate dynamics between physicians and parents in the quest for optimal child health outcomes. Our journey unveils a striking revelation: paediatricians, guardians of our littlest patients, possess a remarkable attribute – mindfulness, across diverse age groups and experiences. They exhibit an unparalleled ability to decipher the silent language of infants and toddlers, navigating through unspoken cues with astute observation and parental collaboration. However, amidst this commendable dedication, a sobering reality emerged. Our research sheds light on a disconcerting trend: the hurried nature of paediatric consultations, driven by an unwavering commitment to swift diagnoses and treatment plans. This urgency, while rooted in the fervent pursuit of child health, sometimes leads to missed opportunities for meaningful communication and connection with parents, leaving them feeling unheard and uncertain. Furthermore, our findings unearth a troubling issue: instances of disrespectful behaviour from clinic staff, tarnishing the patient experience and eroding trust. Yet, within these challenges lies a beacon of hope. By fostering a culture of receptiveness and empathy, paediatricians can transform the consultation experience, guiding parents through diagnoses and treatment plans with compassion and clarity. Moreover, initiatives such as comprehensive soft skills training for clinic staff hold immense promise, offering a pathway to elevate interactions from transactional to transformational. By embracing these transformative practices, paediatricians and their staff members not only enhance their mindfulness of duty and diagnosis but also cultivate a culture of empathy and understanding, enriching the fabric of paediatric care. In essence, our study illuminates a transformative vision for paediatric practice, where every interaction is imbued with care, compassion, and respect. It is through such concerted efforts that paediatricians can forge enduring bonds of trust with parents, laying the groundwork for holistic and humane disease management that honours the intrinsic worth of every child and family. MAAS scale Questionnaire for physicians. The trait MAAS is a 15-item scale designed to assess a core characteristic of mindfulness, namely, a receptive state of mind in which attention, informed by a sensitive awareness of what is occurring in the present, simply observes what is taking place (21). Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item, as shown in the below Table-24. Table 25 below represent Personal process Care Instrument's general communication subscale for parents (22). 1 = almost always, 2= very frequently, 3= somewhat frequently, 4= somewhat infrequently, 5 = very infrequently, 6= almost never.

Table-24: MAAS Questionnaire for Physicians (Paediatricians)

Serial No	Statement	Almost Always	Very Frequently	Somewhat Frequently	Somewhat Infrequently	Very Infrequently	Rarely
1	I could be experiencing some emotion and not be conscious of it until sometime later						
2	I break or spill						

	things because of carelessness, not paying attention, or thinking of something else.
3	I find it difficult to stay focused on what's happening in the present.
4	I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.
5	I tend not to notice feelings of physical tension or discomfort until they grab my attention.
6	I forget a person's name almost as soon as I've been told it for the first time
7	It seems I am "running on automatic," without much awareness of what I'm doing.
8	I rush through activities without being attentive to them.
9	I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there.

10	I do jobs or tasks automatically, without being aware of what I'm doing.						
11	I find myself listening to someone with one ear, doing something else at the same time						
12	I drive places on 'automatic pilot' and then wonder why I went there						
13	I find myself preoccupied with the future or the past.						
14	I find myself doing things without paying attention						
15	I snack without being aware that I'm eating.						

Table 25: Represent Personal process Care Instrument's general Communication Subscale for Parents

Serial No	Statement	Never	Rarely	Sometimes	Somewhat Infrequently	Usually,	Always
Hurried Communication							
1	How often did doctors speak too fast? (SF)						
2	How often did doctors use words that were hard to understand? (SF)						
3	How often did doctors ignore what you told them?						
19	How often did doctors appear to be distracted when they were with you?						
20	How often did doctors seem bothered if you asked several questions?						
Elicited Concerns, Responded							
21	How often did doctors find out what your						

	concerns were? (SF)
22	How often did doctors let you say what you thought was important? (SF)
23	How often did doctors take your health concerns very seriously? (SF)
Explained Results, Medication	
24	How often did doctors explain your test results such as blood tests, X-rays, or cancer screening tests? (SF)
25	How often did doctors clearly explain the results of your physical exam? (SF)
26	How often did doctors tell you what could happen if you didn't take a medicine that they prescribed for you?
27	How often did doctors tell you about side affects you might get from a medicine?
Decision Making	
28	How often did doctors ask if you would have any problems following what they recommended?
29	How often did doctors ask if you felt you could do the recommended treatment?
30	How often did you and your doctors work out a treatment plan together? (SF
31	If there were treatment choices, how often did doctors ask if you would like to help decide your treatment? (SF)
Interpersonal style: Compassionate, respectful	
32	How often were doctors compassionate?
33	How often did doctors give you support and encouragement?
34	How often were doctors concerned about your

	feelings?
35	How often did doctors really respect you as a person?
	How often did doctors treat you as an equal?
Discrimination	
36	How often did doctors make assumptions about your level of education?
37	How often did doctors make assumptions about your income?
38	How often did doctors pay less attention to you because of your race or ethnicity? (SF)
39	How often did you feel discriminated against by doctors because of your race or ethnicity? (SF)
Disrespectful office staff 2	
40	How often was office staff rude to you?
41	How often did office staff talk down to you? (SF)
42	43 How often did office staff give you a hard time? (SF)
43	How often did office staff have a negative attitude toward you? (SF)

Conclusion

In our observational study, we observed a pervasive presence of mindfulness among paediatricians, spanning various age groups and genders. However, our analysis also identified a notable opportunity for enhancement in patient interaction—a pivotal component of physician-patient-centric disease management. As we continue our final research with the remaining sample and align our findings with concurrent research endeavours in India, we anticipate uncovering deeper insights and actionable recommendations for implementation at the physician level. These insights can help the system to undertake interventions to significantly elevate the delivery of care and patient satisfaction within mindful paediatric practice. This on-going pursuit of excellence exemplifies our commitment to academic rigor and professional advancement in the field of healthcare. Through collaborative efforts and scholarly inquiry, we endeavour to cultivate a healthcare environment characterized by mindfulness, trust, empathy, and optimal patient outcomes.

Scope and Limitations

Our observational study was conducted in the Indian state of Bihar with paediatricians from a city like Patna and towns like Muzaffarpur and Darbhanga, giving us a feel/ inference of urban and rural with bias as we have administered questionnaire. In-depth analysis with appropriate inference with minimal bias will be displayed in our final study with the estimated sample size of 147 paediatricians. The in-depth analysis will be conducted by SPSS will give deeper insights towards developing measures of experiencing

better physician-parent interaction towards disease management in the future towards elaborating these results for managing the acute therapy/ condition. Although convenience sampling was used to complete this observational / pilot study, for the final study random sampling will be preferred which would bring consistency and reduce bias.

Abbreviations

MASS Scale: Mindful Attention Awareness Scale, PPC subscale: Personal Process of care instrument, QoL: Quality of life, MBSR: Mindfulness-Based Stress Reduction therapy, MBI: Mindfulness and compassion-based interventions, HC: Hurried communication, ECR: Elicited communication response, ERM: Explained Results and Medication, DM: Decision Making, ISCR: Interpersonal style, compassionate and respectful, DES: Discrimination, DRS: Disrespectful staff.

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Author Contributions

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Conflict of Interest

The authors declare no conflict of interest.

Ethics Approval

We have explained about the study to both physicians, Parents. After obtaining, their positive consent, questionnaire was administered for capturing their responses

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