

The Weight of Words: Indian Physicians' Perspectives on Patient Communication to Promote Diabetes Adherence

Chitra Selvan, Tejal Lathia¹, Shweta Chawak², Praneeta Katdare², Reshma Nayak³, Mahati Chittem²

Department of Endocrinology, Ramaiah Medical College, Bangalore, Karnataka, ¹Department of Endocrinology, Apollo and Fortis Hospitals, Navi Mumbai, Maharashtra, ²Department of Liberal Arts, Indian Institute of Technology Hyderabad, Hyderabad, Telangana, ³Founder, CustEQ Solutions, Navi Mumbai, Maharashtra, India

Abstract

Background: Effective communication by physicians can lead to improved patient adherence, resulting in better patient outcomes and increased patient satisfaction. This study: (i) examined communication with patients when they were non-adherent, (ii) examined attitudes toward common communication cues, and (iii) explored communication approaches to encourage diabetes adherence used by Indian physicians. **Methods:** Using a concurrent mixed methods approach, Indian physicians, specialized in diabetes and/or endocrinology were recruited, to complete a survey containing quantitative ($n = 834$) and qualitative ($n = 648$) questions. The questions included (i) whether physicians expressed disappointment and used scare tactics for non-adherent patients, (ii) to rate the importance of common communication cues when promoting adherence, and (iii) nested, qualitative questions to understand their communication approach to promote adherence. The data were analyzed using descriptive statistics and qualitative content analysis, respectively. **Results:** The quantitative study reported that the majority of the physicians sometimes showed their disappointment in their patient's progress (44.4%), sometimes used scare tactics to convey disease severity due to non-adherence (34.3%), and rated all communication cues as most important. The qualitative findings revealed that physicians used paternalistic (authoritative, educational, authoritarian) or collaborative (multistakeholder, patient-centered) approaches and the language cues of fear, blame, and threats to promote patient adherence. **Conclusion:** These findings highlight the need for communication skill training programs for Indian physicians focused on empathic, non-verbal, supportive, and inclusive techniques so as to promote patient adherence. Further, these trainings need to use role-playing, video recording, and peer feedback methods to show physicians how to implement these skills during patient interactions.

Keywords: Communication skills, mixed methods, non-verbal communication, physicians

INTRODUCTION

The World Health Organization reported that 2.2 million individuals with diabetes in India have diabetes-related complications such as hypertension, pulmonary issues, and diabetic foot.^[1] Diabetes care for patients involves adherence to physician's recommendations for diet, exercise, medication, self-monitoring of blood glucose, and attending medical appointments.^[2] A multinational diabetes attitudes, wishes and needs (DAWN) study with 13 countries reported that patients encountered psychosocial issues, particularly diabetes-related worries, which impeded their self-care efforts.^[3] Following this, another study (DAWN-2), carried out among 17 countries, found that patients had increased depression, poor quality of life, relational issues, and overall poor physical health.^[4] Given this, multiple studies emphasized the importance of physician communication in order to promote patient adherence.^[5-7] A

central feature of 'good' physician communication skills, as identified by patients worldwide, is the display of a combination of empathy, expertise, and the ability to respond to patients' emotions.^[8-11] In India, patients report a preference for physicians who are also authoritative,^[12] as they believe this quality conveys expertise and an ability to guide the patient through the medical care trajectory.

Address for correspondence: Dr. Chitra Selvan,
Department of Endocrinology, Ramaiah Medical College, New BEL Road,
MSR Nagar, Bangalore - 560 054, Telangana, India.
E-mail: chitraselvan@gmail.com

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Worldwide diabetes research underscores the importance of training physicians in empathic communication skills so as to promote patient adherence.^[13-17] In India, the Government of India and Research Society for Study of Diabetes in India (RSSDI) also give emphasis to diabetes communication, evidenced through several studies showing the link between physician communication skills and favorable patient adherence outcomes.^[18-20] Reflecting this, the National Diabetes Educator Program (NDEP) in India was initiated in 2011 and trained 1,032 diabetes educators on communication and clinical skills of patient management in diabetes.^[21] However, this program continues to focus on capacity building in India via diabetes educators and not skilling physicians who treat patients with diabetes.^[21]

There are sporadic and sparse interventions on communication skills training for Indian physicians specifically designed to promote diabetes adherence. Of these, a landmark study by Murugesan *et al.*^[20] trained 3,023 physicians on a range of aspects of diabetes care which included material on medical care, behavioral guidance, patient education and counseling (PEC), and teamwork. The authors found that the physicians rated PEC training modules and their importance to the clinical settings as the highest among all the modules in the program.^[20] More recently, our group developed a 'Language Matters' document for Indian physicians which described the patients' experiences of interacting with their diabetes specialist, recognized the role of empathic communication skills in maintaining optimal patient adherence, and made recommendations for tailored care for patients based on not only their medical but also emotional needs.^[22] During the development of this document, the authors noted a lack of studies emerging from India which tried to understand adherence-linked physician communication in routine diabetes-related medical practice. Therefore, using mixed methods, the current study aimed to (i) examine communication with patients when they were non-adherent, (ii) examine attitudes toward common communication cues, and (iii) explore communication approaches used to promote diabetes adherence among Indian physicians.

METHODS

Participants

Eight hundred and thirty-four physicians (female = 259; mean age = 45.82 years) specialized in diabetes and/or endocrinology were recruited into this study. The inclusion criteria were (i) physicians who were currently actively engaged in their medical practice, (ii) a majority of the consultations were with people who have diabetes (self-reported), (iii) physicians who had an MBBS as a minimum level of education, and (iv) were Indian citizens living in India. The ethics approval for the current study was obtained from the Ethics Committee in Ramaiah Medical College and Apollo Hospitals, Navi Mumbai.

Procedure

Using a cross-sectional design and a concurrent mixed methods approach, the participants were asked to respond to an online survey that consisted of quantitative questions and nested qualitative questions. The questionnaire was constructed through a multistep process. First, Chitra Selvan (CS) developed a list of questions that were based on their daily observations as a practitioner and faculty of endocrinology in a large hospital in India. After this, the list of questions was presented to TL Tejal Lathia, both of whom worked closely and every day with patients with diabetes, for their comments on the questionnaire's phrases, grammar, length, and types of questions. This process was iterative, and after three attempts, a final list of questions was drafted. Lastly, an expert panel of 10 physicians who regularly consulted with patients with diabetes reviewed the draft questionnaire and provided their feedback. The comments pertained mainly to the grammar and length of the questionnaire, which were all addressed by Chitra Selvan (CS). Care was taken to phrase the questions in Indian English[^] and reflected how physicians routinely referred to their patient interactions (e.g., 'patient progress' was more frequently used in everyday conversation rather than 'patient adherence'). The final questionnaire consisted of two parts: a quantitative section and a qualitative section.

The online survey was hosted by Google Forms. Using convenience and snowball sampling, the survey link was shared via email and social media platforms such as WhatsApp, Facebook, and Twitter in which TL and CS had a membership. The invitation message introduced the study and its aims, eligibility criteria for the study, explained that ethics clearances were obtained, and provided a link to the survey for those who were interested. The physicians who used the link were led to a page that asked whether a majority (i.e., at least 50%) of their practice entailed seeing patients with diabetes (the response was forced-choice with a 'yes/no'). If they answered 'yes, then the participants' informed consent was collected following which the survey began. The questionnaire was fully anonymized such that no personal identifiers (e.g., name, mobile number) were collected. In this way, 914 physicians participated in the study. The incomplete surveys or when the physicians did not meet the inclusion criteria (e.g., were not currently practicing in India), were excluded from the data analysis. Therefore, the final sample consisted of 834 physicians who responded to the quantitative section, of whom 648 responded to the qualitative section too.

Measures

Quantitative questions

A 5-point Likert scale (never, rarely, sometimes, often, and always) was used to measure whether physicians (i) displayed disappointment when the patients' adherence outcomes were not as expected and (ii) used scare tactics to communicate to patients the disease severity brought on by non-adherence.

A 5-point Likert scale (least, less, in-between, more, most) was used to rate the importance of communication cues for

physicians when promoting adherence to patients during their consultation. The scale consisted of four common communication cues: words and phrases, tone of voice, body language, and eye contact.^[23]

Qualitative questions

Open-ended questions were used to understand the communication approach and the word/phrases (i.e., language cues) physicians used to promote adherence.

Analysis

The quantitative data were analyzed using the Statistical Software of Social Sciences (SPSS) version 26.0. Descriptive statistics were used to understand the quantitative responses. For the qualitative responses, the data were analyzed using qualitative content analysis (QCA).^[24] The data underwent two stages of analysis. Initially, the first and second coder NA and Mahati Chittem (MC) carried out the line-by-line analysis and independently marked and categorized keywords, phrases, and texts to identify the codes. The codes were developed by keeping the research question as a guideline. The codes were further categorized based on their similarities. In this way, two categories and five codes were arrived at using QCA. After independent coding and categorization of the data, inter-rater reliability (Kappa) was calculated to assess the coders' level of agreement. The Kappa score obtained for the questions was between 0.72 and 0.81 indicating a good level of agreement. Table 1 describes the demographic and work-related information for the quantitative and qualitative arms of the study, Table 2 provides the quantitative results, and Table 3 provides illustrative quotes from the participants.

RESULTS

Quantitative study

Communication with non-adherent patients

The physicians reported showing their disappointment in their patient's lack of adherence sometimes ($n = 370$; 44.4%), followed by often ($n = 176$; 21.1%), and rarely ($n = 142$; 17%). The physicians reported using scare strategies to convey disease severity due to non-adherence sometimes ($n = 286$; 34.3%), followed by rarely ($n = 243$; 29.1%), and never ($n = 155$; 18.6%). The majority of the physicians rated the following communication cues as most important in promoting adherence: eye contact ($n = 406$; 48.7%), words and phrases ($n = 349$; 41.8%), tone of voice ($n = 346$; 41.5%), and body language ($n = 330$; 39.6%). Table 2 describes the quantitative findings.

Qualitative study

Communication approach to promote adherence

The physicians used five communication styles—authoritative, family-centered, patient-centered, educational, and authoritarian—to encourage adherence in the patients. These styles were classified as paternalistic (authoritative, educational, authoritarian) and collaborative (family-centered, patient-centered) approaches. The physicians who used a

Table 1 Demographic and work-related information

Characteristic	Quantitative		Qualitative	
	n	SD/%	n	%
Age (years)	45.82	10.08	45.21	11.17
Gender				
Male	575	68.9	434	67.1
Female	259	31.1	212	32.7
Educational qualification				
MD Medicine	311	37.3	226	34.9
Specialisation in Endocrinology	296	35.5	111	17.1
Diploma in Diabetology	126	15.1	226	34.9
Others	101	12.1	85	13.1
Medical practise				
Private hospital	295	35.4	227	35.4
Private clinic	252	30.2	213	32.9
MC/MH	120	14.4	82	12.7
Private hospital & private clinic	101	12.1	80	12.3
MC/MH & private clinic	32	3.8	20	3.1
Private & MC/MH	20	2.4	13	2.0
All above	14	1.7	13	2.0
Area of practise				
Urban	671	80.5	519	80.1
Semi-urban	146	17.5	117	18.1
Rural	17	2.0	12	1.9
Patients' waiting time at practice				
Less than 30 minutes	365	43.8	294	45.6
30-60 minutes	334	40.1	253	39.0
1-2 hours	85	10.2	62	9.6
More than 2 hours	49	5.9	36	5.6
Length of consultation for new patient				
1 to 10 minutes	160	19.2	108	16.7
11-20 minutes	488	58.5	382	59.0
21-39 minutes	145	17.4	118	18.2
More than 30 minutes	41	4.9	38	5.9
Length of consultation for follow-up patients				
1-5 minutes	131	15.7	92	14.2
6-10 minutes	440	52.8	335	51.7
11-15 minutes	205	24.6	166	25.6
More than 15 minutes	58	7.0	53	8.2

%=Percentage, MC/MH=Medical College/Municipal Hospital

paternalistic approach revealed that they relied on a variety of disciplinary strategies such as scolding/yelling at their patients, and reminding them that "strictly" following the adherence guidelines was important (authoritative) or asking patients to stop visiting their practice since their progress was disappointing "time and again," and finding fault in the way the patients were managing their diabetes (authoritarian). Some physicians used educational material such as pamphlets, infographics, and pie charts to reinforce the patients' knowledge and the need for "good control" of diabetes, although they did not attempt to assess patients' levels of health literacy or regulate the information shared with the patients' needs.

The physicians who used the collaborative approach revealed that they relied on a patient-centered communication style

Table 2 Quantitative results

Question	Never		Rarely		Sometimes		Often		Always	
	n	%	n	%	n	%	n	%	n	%
I show/convey disappointment when the patient's progress is not as per expectations.	56	6.7	142	17.0	370	44.4	176	21.1	90	10.8
I use scare tactics with patients to convey the seriousness of non-adherence.	155	18.6	243	29.1	286	34.3	110	13.2	40	4.8
Importance of communication cues to promote adherence	Least		Less		In-between		More		Most	
	n	%	n	%	n	%	n	%	n	%
Words and phrases	43	5.2	24	2.9	119	14.3	299	35.9	349	41.8
Tone of voice	16	1.9	56	6.7	122	14.6	294	35.3	346	41.5
Body language	15	1.8	46	5.5	141	16.9	302	36.2	330	39.6
Eye contact	18	2.2	31	3.7	110	13.2	269	32.3	406	48.7

n=Number, %=Percentage

where they empathized, supported, and encouraged their patients including using verbal (apologizing, reassuring, asking about how the patient was doing, cheering the patient up) and non-verbal (nodding to show understanding, reassuring through touching and/or smiling) cues. Some physicians took a family-centered approach in diabetes management by involving themselves, the patient, and their family in medical discussions in order to solve problems and overcome any barriers to adherence. Table 3 illustrates the physicians' statements verbatim for each of the codes and categories.

Language cues used to promote adherence

The physicians used words and phrases during the consultation which portrayed fear, blame, and threats in order to promote patient adherence. They said that they engaged in fear-inducing methods by talking about the adverse consequences of the illness such as dialysis, foot ulcer, and in certain cases, death to encourage the patients to adhere. The physicians also used language that placed blame on the patient for not being able to manage diabetes and made threats such as telling the patients to "not come back" or "see another physician" as a way to promote adherence. Table 3 illustrates the physicians' statements verbatim for each of the codes.

DISCUSSION

The quantitative arm of this study found that the physicians only sometimes showed their disappointment in the patients' poor adherence and, in order to promote adherence, sometimes used scare strategies. Although research strongly recommends the physicians avoid or limit sharing negative communication styles with patients,^[25] some patients with diabetes continue to want their physicians to use scare tactics in order to underscore the disease severity and need for adherence.^[26] Therefore, it is possible that the physicians in the current study encountered the patients who preferred a stronger form of communication and, consequently, resorted to inducing fear in them or showing their disappointment in the patients' progress. Yet, the physicians may be aware of the shortcomings of verbal communication which is focused on making patients afraid of the consequences of their (non) action, hence, they reported in

this study to be using it only on occasions. These findings point to the need for physicians in India to educate their patients on the inappropriateness of using negative messages in medical consultations and introduce them to the benefits of alternate, more positive ways to communicate to ensure adherence.

The qualitative findings, however, provided a more nuanced understanding of the communication approaches that the physicians used to promote adherence, i.e., the paternalistic or collaborative approach to care provision. Within the paternalistic approach, the physicians were observed to use authoritative, educational, and authoritarian styles of communication. These findings echo the Indian patients' expectations of their physicians to be authoritative figures due to their medical expertise, thus, guiding the patients through the medical care trajectory and making decisions for them.^[12] However, the physicians in this study revealed using authoritarian styles of communication which hinged on being cold and strict toward patients. Although research shows that patients prefer physicians who were authoritative (i.e., strict and warm),^[12,26] they also objected to the physicians who engaged in authoritarianism as this made them feel pressured and further enmeshed into socially endorsed roles of the "good" patient.^[26,27] Therefore, it is important for Indian physicians to understand the difference between a patient-endorsed authoritative style and the more problematic authoritarian style. The physicians also revealed educating patients by using written/visual material as a way of reinforcing or adding to the patients' knowledge on the benefits of adherence. These findings indicate the physicians' willingness and ability to use a range of communication strategies (i.e., not only verbal or non-verbal) in their consultations. Research shows that material such as pamphlets, infographics, and pictograms can be essential communication aids to help encourage, educate, and promote diabetes adherence.^[28]

Within the collaborative approach, the physicians in the current study reported using family-centered or patient-centered communication styles to promote adherence. Diabetes adherence demands lifestyle changes such as dietary alterations which cannot be done without the support and acceptance of one's family.^[29] Further, the research in India

Table 3 Participant quotations

Question	Communication approach	Communication style	Sample statements	
Communication approach to promote patient adherence	<i>Disciplinary</i>	Authoritative	Sometimes I scold him [patients]. P04 (39 years, female, MD Medicine) Sometimes scold them for being irresponsible or irregular. P494 (62 years, Female, MD Medicine) Explain them again and if defaulters very time they are warned about complications a bit sternly. P101 (51 years, Male, DM Endocrinology) Will educate regarding complications of diabetes. P18 (42 years, Male, DM Endocrinology)	
		Educational	I explain them that eventually they will need an insulin. Explain them the legacy effect of good glycaemic control. Will refer them to special unit in hospital to educate them about insulin usage. P174 (33 years, Male, MD Medicine) I have a pictorial desktop educational material that has most of the answers. Makes it easy. P34 (42 years, Male, DM Endocrinology)	
		Authoritarian	That's why your sugar is high, you haven't done enough, No can't stop it, you're not listening. P31 (40 years, Female, DM Endocrinology) Where did you vanish [gayab; Hindi word]? How can you take medicine on your own? If you can't follow advice then you don't need to show me. What really [kya muskil lagti hai, Hindi word] is the difficulty to buy glucometer. P83 (41 years, Male, MD Medicine) Can take your money back, Non-compliance [patient's] doesn't affect my health, so why today u have come back after so long, if u don't want to listen to me, please don't come back, I'm not magician. P35 (39 years, Female, DM Endocrinology)	
		Family-centred	Work on motivation for the family and patient. P96 (36 years, Male, Diploma in Diabetology) Encourage the family to embrace P246 (40 years, Male, DM Endocrinology) While explaining regarding diet and lifestyle explain whole family to incorporate and then explain risk of disease. P87 (43 years, Male, DM Endocrinology)	
			Patient-centred	First always ask them how they are and what happened and then gently discuss what can we do together to get back on track. Treat them with love, depend time with them. Listen to them. they almost always yield. P176 (34 years, Male, DM Endocrinology) I hum and pat on their back/shoulder and smile. P109 (30 years, Male, MD Medicine) My aim is to find about difficulties which patient is facing in following my advice and also to convey significance of achieving targets. P554 (40 years, Male, DM Endocrinology)
	Language cues to promote adherence	Fear	It will hurt your heart/kidney/eyes/brain, you might die early, you will not die but suffer, sometimes thing beyond the flavour on your tongue. P584 (34 years, Female, DM Endocrinology) Failure to take care will lead to amputation, leg looks bad, you are not following up regularly. P601 (64 years, Female, Diploma in Diabetology) Threat of complication, you will lose eyesight or foot. Do this, otherwise [fear of complications]. Fear of kidney failure and have to undergo dialysis. P116 (65 years, Female, MD Medicine)	
			Blame	Why have you been consuming biscuits and sweets despite repeated warnings to not eat them? P51 (37 years, Female, Diploma in Diabetology) You are irresponsible, you are careless, you are lazy by not going for walk nor doing exercise. You don't have control on your food choice. P02 (47 years, Female, Diploma in Diabetology) Absolutely. Useless. Irresponsible. P108 (55 years, Female, DM Endocrinology)
			Threats	You either follow the treatment properly or go seek second opinion from someone else. P57 (62 years, Female, MD Medicine) What happened? Sugars are too bad! You should take some responsibility! I think maybe I should be even stricter. P252 (36 years, Male, DM Endocrinology) If you don't follow the advice, you will not get better P291 (51 years, Male, MD Medicine)

emphasized the significant role families play in medical care, especially in terms of decision-making and providing patient support.^[30] Therefore, using a family-centered style to gain the patients' cooperation in adherence indicates the physicians' cultural competence. The physicians also revealed using patient-centered styles which consisted of showing empathy, support, and encouragement to the patients. These were conveyed both verbally and non-verbally, the first only instance where the physicians expressed themselves through gestures and vocalizations. These findings indicate that some physicians in India are aware of and accurately utilize patient-centered communication, a style that enjoys strong research and clinical practice endorsement both globally and in India.^[13,17]

The quantitative arm found that a majority of physicians recognized the role of a range of communication cues of eye contact, words/phrases, tone of voice, and body language, rating these to be extremely important in promoting adherence. However, the physicians revealed in the qualitative arm that they used negative language cues which were reminiscent of authoritarianism to promote adherence. These findings suggest that the physicians' awareness of non-verbal communication did not necessarily translate into practice. Notably, the language cues the physicians reported using were laden in fear-inducing, fault-finding, and threatening messages which can be detrimental to the patient's well-being, upholding trust, and patient satisfaction. However, research shows that patients do not respond positively to harsh language, with outcomes being poor among patients who perceived their physician to use language which was considered to be pressurizing.^[26,27] Indeed, the Language Matters movement which began in 2011 focussed on moving from negative/judgemental phrases to more positive and encouraging language towards patients.^[31] Consequently, culturally-sensitive guidelines described via the Language Matters document were developed in the UK,^[32] Canada,^[33] France,^[34] and India.^[22,35] Further, following the DAWN and DAWN-2 studies, Kalra and colleagues established guidelines for the psychosocial management of diabetes for physicians in India which include domains of general issues (e.g., encouraging a relationship-centered approach), psychosocial assessment and management (e.g., introducing problem-solving therapy, anxiety management techniques), and social assessment and management (e.g., examining affordability of care, enlisting community support). These efforts from Indian diabetes specialist highlight a shift towards an inclusive, comprehensive and culturally-appropriate approach to diabetes care.

Implications

The current study findings suggest that the curriculum in the existing national training programs which balance medically-oriented communication with some fundamental psychoeducation material may be relevant, useful, and utilized with ease by the Indian physicians in their daily practice.^[20] However, these curricula might benefit from including components of empathic communication, active listening, inquiring into patients' needs, and using supportive

language. Therefore, future research should develop, design, and test the effectiveness of communication skills training programs focus on these patient-sensitive and inclusive techniques. Further, this study highlighted that the physicians may be aware of the need for and methods to engage in tailored communication, but lack training in how to implement these techniques into their routine patient interactions. Hence, the communication skills training efforts can also include role-playing, video recording, and peer-driven feedback methods so as to demonstrate how to practice these communication techniques during routine medical consultations.

Limitations

There are some limitations of this study. First, the cross-sectional design limits opportunities to trace any changes in communication over time. Future research should use longitudinal designs to better capture these changes. Second, this study was narrowly focused on communication in relation to promoting patient adherence. Future diabetes research on communication in India can also explore topics of insulin initiation, diabetes-related complications, and genetic aspects of diabetes. Third, the sample of the current study was skewed with a higher representation of participants practicing in urban locations. Hence, future research needs to include physicians practicing in a variety of locations in India such as in semi-urban, rural and tribal areas.

CONCLUSION

Using mixed methods, the current study examined the Indian physicians' communication with their patients who were non-adherent, with a special focus on how they approached promoting diabetes adherence. While the quantitative findings showed that the majority of the physicians sometimes engaged in negative communication strategies and rated all communication cues as very important in promoting adherence, the qualitative findings revealed that they used paternalistic (authoritative, educational, authoritarian) or collaborative (multistakeholder, patient-centered) approaches and negative words and phrases to promote patient adherence. This study highlights the need to train physicians in communication skills of empathy, patient inclusiveness, and engaging in supportive language to promote diabetes adherence while using role-playing, video recording, and peer feedback techniques to learn how to implement these skills in routine medical practice.

Footnote

Indian English denotes a language used commonly in India which emerged from a combination of English and the indigenous language (primarily Hindi). Indian English has a distinct grammar and vocabulary.

encyclopedia.com [Internet]. Oxford University Press; c2019[cited 2021 September 27]. Indian English. Available from <https://www.encyclopedia.com/humanities/encyclopedias-almanacs-transcripts-and-maps/indian-english>.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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