

2025

volume 22 | issue 2

ENQ

The ARCC Journal for Architectural Research

Developing a Structured Framework for Enhanced Experience in KashiVishwanath Dhaam: A Confirmatory Factor Analysis

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Abstract

Temple experiences are complex and multifaceted, encompassing spiritual, emotional, and social dimensions. Observing, understanding, and analyzing these experiences can provide important insights for authorities seeking to make the devotee journey more memorable. There is abundant research exploring the issues and experiences of devotees separately, so there is already a substantial body of work on parameters that influence the journey. However, no holistic study has examined pleasant and spiritual encounters alongside devotee management across different temple spaces. These factors have a significant capacity to influence users' behavior. In a temple, these constructs have a twofold role: i) shaping visit intentions, rituals, spatial affinity, and temple shrine and precinct experiences and ii) contributing to the formation of memories. The researchers therefore set out to identify the most dominant indicators of these constructs and to organize them along the temple journey to intensify devotee interaction. To validate the efficacy of the proposed model, a sample of 200 devotees (both local residents and pilgrims) was surveyed in the Kashi Vishwanath Dham temple complex, and Confirmatory Factor Analysis (CFA) was employed. CFA is a technique that yields results on i) the fit of the model with respect to the data and ii) the factor loadings, variance, and covariance of the observed parameters. The study aims to evaluate the psychometric properties of the individual indicators, through a structured questionnaire, that contribute to the overall journey experience categorized under pleasant, spiritual, and devotee management constructs. The findings reveal that the questionnaire has substantial validity for evaluating the pleasant journey (PJ) with a three-factor model of 12 indicators, the spiritual journey (SJ) with a four-factor model of 18 indicators, and devotee management (DM) with a three-factor model of 15 indicators. The indicators used for the study are distinct yet interconnected, reflecting the complex nature of temple experiences. The study advances existing literature by highlighting key aspects that contribute to enhanced temple experiences.

Keywords: confirmatory factor analysis, devotee experience, pleasant journey, spiritual journey, devotee management.

Stable URL: <https://arcc-journal.org/index.php/arccjournal/article/view/1294>
DOI 10.17831/enq:arcc.v22i2.1294

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1. INTRODUCTION

Worshipping God has always been an integral part of Hindu culture occurring both in homes and temples. Initially, temple worship took place in single-cell structures, which gradually evolved into magnificent complexes due their diverse functions. Inevitably, temple complexes became places for individual worship and collective belief. Connecting with the divine, offering daily prayers, performing rituals, fostering spiritual well-being, supporting self-realization, finding solace when stressed, showing gratitude when happy, crying with grief, celebrating festivals, participating in ceremonies, and strengthening social bonds are among the many reasons devotees visit temple complexes. According to PEW research, 53% of Hindus visit temples for worship at least once a week (Sahgal 2021). As temples transformed from single-cell structures to large complexes, they emerged as magnificent examples of structural stability. Architects designed them with acoustics in mind so that devotees could hear the chants, the ringing of bells, and the sound of conchs from a distance. They also studied the four cardinal directions before orienting the built form. The basis of the temple plan was the Vastu Purusha Mandala, which represents the universe, and the movement of devotees from light to the dark sanctum expresses the journey from the mundane to the exceptional experience of enlightenment. The repeated patterns and shikharas (temple pinnacles) pointing to the sky support meditation. Therefore, temple architecture is both carefully calculated and deliberately formulated so that its geometry results in a synchronization of science and spirituality. This idea is supported by architect David Adjaye, who noted that, "Buildings are deeply emotive structures which form our psyche. People think they're just things they maneuver through, but the makeup of a person is influenced by the nature of spaces."

The temple journey commences at the entrance portal, passes through various assembly halls (mandapas), continues with visits the main shrine, other shrines, a holy water body, and a sacred landscape area, and finally culminates at the exit portal. This overall environment generates a wide range of emotions. These emotions also arise from varied functions, such as social ceremonies (marriages and traditional practices), religious discourses, and preaching. The role of temples is not limited to the above-mentioned functions; they have also served as places of shelter.

In temples, devotees feel an immense energy that bridges the gap between themselves and the divine through various rituals, prayers, and offerings. Together, these factors invoke a sense of community and belonging among worshippers. There are designated spaces for performing various daily and special chores, following

a strict order. Upon entering the temple complex, the basic amenities and the physical environment play a significant role in creating a pleasant experience. The opportunity to perform rituals and observe the deity (the Lord to whom the temple is dedicated) culminates in spiritual satisfaction. Hindrance-free movement and proper safety measures (Illiyas 2013) are directly related to devotee management.

All three of the above-mentioned constructs highlight the importance of studying them as variables in shaping the devotee's temple experience. Therefore, a thorough investigation of the strength of the relationships among these constructs and their factors necessitates a valid and reliable assessment of devotee attitudes to enhance the experience. Yet, there has not been holistic research that combines observation, devotee interaction, and inferential analysis. Although researchers have developed various tools to evaluate devotees' satisfaction and the safety measures in place for them, these tools were designed for specific studies that focused on one or more isolated aspects of the devotee experience. For example, a descriptive study gauged the relationship between pilgrim satisfaction and services, safety, and security (Asthana 2019), analyzing destination image, cultural impact, and spirituality. Another study examined the influence of precinct aesthetics, cleanliness, information dissemination, basic amenities, and security on pilgrims' experiences in a qualitative cross-sectional study at the Prambanan Temple in Yogyakarta (Rohman 2021).

Additional studies have evaluated the evolution of spaces (Bandyopadhyay 2019), the rituals performed (Kulshreshtha 2022), the management of large Hindu religious gatherings (Bhatt 2017), the maintenance of specific temple spaces, and religious crowd monitoring (Almeida 2019). Other researchers have assessed the experiences of devotees in different religious built forms, such as churches (Kimaru 2015). However, no research offers a comprehensive analysis of devotee experience that jointly considers the pleasant journey—focused on physical and sensorial experience—the spiritual journey associated with chores performed for the deity, and devotee management related to movement inside the precinct, security protocols, and amenities provided for their comfort.

This research focuses on creating a structured scale, ranging from strongly disagree to strongly agree, to gauge devotees' level of agreement with each variable. It aims to provide a dependable and accurate assessment of variables related to pleasant experience, spiritual experience, and devotee management during the devotees' temple journey. To achieve this aim, it is necessary to identify and distinguish the parameters under these three headings and to

formulate a theoretical framework for allocating dominant parameters to the most preferred spaces for an enhanced temple experience. Temple management authorities and policy-makers in different regions—such as state governments, government-formed trusts, or, in some cases, royal families—could use this scale to evaluate devotees' outlooks. These evaluations could provide insightful information on pleasant and unpleasant experiences, thereby highlighting gaps in policy formulation and in the implementation of safety protocols. The factors were identified after reviewing nearly 100 research papers from Google Scholar, Scopus, Web of Science, and UGC Care list from 2018-2024 (with a few influential exceptions outside this period), as well as relevant books, theses, and conference proceedings.

This study utilized the factors identified in the literature review and applied Confirmatory Factor Analysis (CFA) to assess the relationships between these factors and the constructs of pleasant journey, spiritual experience, and devotee management. The authors formulated the sequence of investigation by categorizing these factors under their respective heads.

India has an impressive collection of approximately 650,000 Hindu temples (Preston 2025). These complexes have long been centers of community interaction and icons of cultural identity. Varanasi—also known as Benaras or Kashi—is one of the oldest living cities in the world. Appropriately known as “cultural capital of India” (Yadav 2025), Varanasi derives much of its identity from Kashi Vishwanath temple. The temple is situated on the banks of the River Ganges, and visiting this temple complex is believed to be an important stage on the path to liberation.

In addition to these reasons, the researchers chose the sacred enclosure of Kashi Vishwanath Dhaam, Varanasi (Figure 1), as the study site because: i) a significant portion of the city's economy depends on religious tourism (Aron 2024); ii) the temple is a hub of social and traditional activities; and iii) after transformation to Kashi Vishwanath Dhaam, the temple has witnessed a substantial increase in devotees footfall (TNN 2024).

To provide a clear conclusion, the paper is divided into four sections. The first section, Introduction, discusses the role of temples and their multifunctional aspects, highlights gaps in the existing literature, and explains the objective of this research, namely to segregate parameters under the heads of pleasant journey, spiritual experience, and devotee management. The second section, Literature Review, examines, analyzes, and categorizes parameters related to devotee experience creation, rituals and activities, spatial narratives, and measures adopted for religious crowd management. The third section, Research Methods, explains the need for Confirmatory Factor Analysis and is followed by a detailed presentation on the findings that establish the robustness of the proposed model. The study culminates in a Conclusion that synthesizes the overall intent of the research and outlines directions for future research.

2. PARAMETERS OF TEMPLE EXPERIENCE

In general, movement from one architectural space to another within a built form is termed ‘circulation’ (Karwaan 2024). Movement within a built form is a cognitive process in which users pass through a series

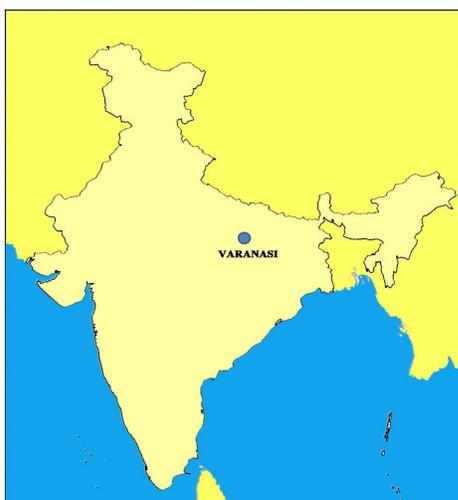


Figure 1: a) Position of Varanasi in India Map. b) Photograph of Kashi Vishwanath Dhaam taken by researcher on site

of spaces and interact with them through their senses. In temple complexes, this process unfolds in stages of consciousness—from the mundane to the divine, from a temporary state to an enduring experience (Mitchell 1988). Therefore, this circulation within the sacred enclosure is referred to as a journey in this study.

This temple journey starts with the very thought of visiting the sacred complex. The actual formation of experience starts as the locker rooms where devotees deposit their belongings and ends when they collect them. The barefoot journey starts at the entrance portal of the complex and follows a strict mandate of deity observance, proceeding through various halls (mandapas) to the sanctum (garbha griha). After deity observance, the journey also includes time spent at various sub shrines, the sacred water body, open spaces, and gardens. The devotee group includes male, female, and children of various age groups, as well as local residents and pilgrims.

In Agama Shashtra, a temple is described as the body of the god, and the image or sculpture in the sanctum is called the soul (Nain 2025), and devotees seek to connect to both. The cognitive process mentioned above includes experiential interactions, sensorial communication, and cultural and traditional associations. These experiences of both regular and first-time devotees build up the destination image and have a profound effect on their revisit intentions, based on their comfort level, spiritual satisfaction, and sense of safety during religious chores. Consequently, the researchers categorized various relevant parameters from the literature under three main heads—i) pleasant journey, ii) spiritual journey, and iii) devotee management—and analyzed the relationships among them.

The environment that feels inviting when it is less crowded has a very different impact when it becomes overcrowded. In such a scenario, the psychology of an individual often leads to heightened suggestibility, and the whole crowd may begin to behave irrationally. This suggestibility negatively affects religious experiences. Every devotee in the crowd has a different cognitive ability to understand the environment and act accordingly, which shapes their emotional state and social interactions. Effective crowd management ensures safety, comfort, and a feeling of community. When a devotee feels safe, they can perceive their environment more clearly by attending to factors such as comfort, aesthetics, architectural spaces, rituals, and activities. In turn, these factors contribute to a sense of reverence and contemplation, resulting in a memorable experience. An enhanced pleasant and spiritual experience for a single devotee can therefore contribute to an enhanced experience for the crowd as a whole. Therefore, to comprehend the overall temple

journey, an in-depth analysis of an integrated model that includes pleasant and spiritual journeys together with devotee management becomes extremely important.

Throughout this journey, the one dominant attribute is space, which is both measurable and abstract, depending upon the context. The temple complex contains various spaces (Granoff 1998): i) those with dedicated functions and ii) those that form part of circulation and can be used for multiple purposes (Patnayak 2019). Using the framework derived from the assessment of the above-mentioned constructs, the researchers sought to identify activities that could be arranged in these spaces in ways that integrate built form and open spaces, thereby offering a diverse array of spatial interactions and influencing emotions through various activities. These interventions could be designed at the most liked spaces and developed as participatory spots near and around the built form (Figure 2) to enhance sensorial and experiential engagements (S. Gupta 2016).

2.1 Pleasant Journey (PJ)

The word ‘pleasant,’ according to the Oxford Dictionary, refers to something that satisfies one’s emotions and results in a state of happiness. In the context of a temple visit, spiritual satisfaction and pleasant experience may appear similar, but they are in fact distinct and both are important for creating a positive destination image. The level of comfort, including the overall environment of the temple (Rohman 2021, Sridhar 2008), exterior appeal (Granoff 1998), and interaction with other devotees (Rybina 2021), strengthens community feeling (Patnayak 2019) and space attachment (Nguyen Viet 2021), all of which contribute to pleasantness. These parameters not only foster positive feelings but also provide sensorial gratification. As one approaches the temple, the sights, sounds, and scents create an immersive experience that transports the visitor into a state of relaxation and contemplation, supporting self-realization and reducing pain and distress. A temple journey that is comfortable and hassle-free for both the main shrine and the sub-shrines, as well as for other spaces such as water body (Granoff 1998) and temple steps (Kulshreshtha 2022), plays a significant role in enhancing the overall experience (Shaw 2018, Singh Purnima 2020). The search for relevant parameters started with a broad review of research organized under various themes, as summarized in Table 1.

2.1.1 Derivation of indicators for Pleasant Journey

A visit to temple complexes is often motivated by immense faith in the deity, religious purposes, rituals performance, spiritual and emotional well-being, and sometimes the search for solitude and self-discovery. Beyond spiritual and emotional encounters, the physical

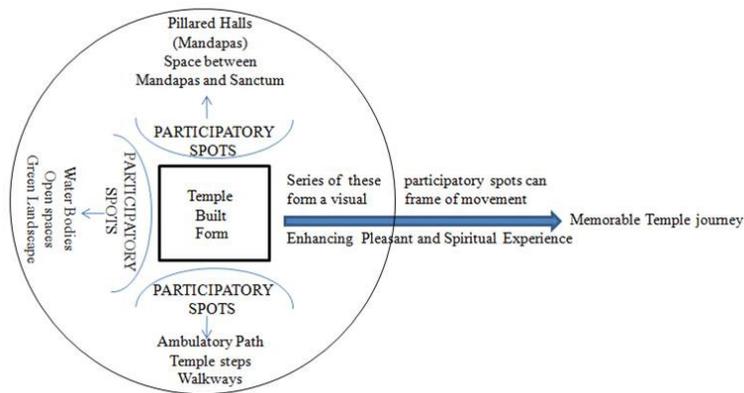


Figure 2: Figure explaining the scope of creation of Participatory Spots at most liked spaces. Due to heavy footfall or festivities, the devotees are deprived of these emotions. So, these parameters identified and incorporated in a well-planned manner will not only result in devotee satisfaction but also assure safety.

S.No	KEYSEARCHES	PARAMETERS UNDER WHICH KEYSEARCHES WERE PLACED	REVIEW OF LITERATURE	SUMMARY FOR PLEASANT JOURNEY	QUESTIONS FOR KEYSEARCHES
1	Basic amenities	Environment	Michal Apollo, Yana Wengel Heike .Joice K. Joseph, Sheikh Majedul Huq, Shriya P. Dalal	These studies revealed that different aspects like aesthetics, ambience, community feeling, amenities and safety have the capacity to induce feeling of ease, contentment and belonging. Each of these parameters elicits a sense of pleasantness and contributes to well being and happiness. This in turn promotes religious tourism.	<ol style="list-style-type: none"> 1) Purpose of visit 2) Overall ambience 3) Subjective experience, including an overview of: <ol style="list-style-type: none"> a) Infrastructure b) Services and Treatment c) Satisfaction Levels 4) Space influence 5) Space Attachment factors 6) Social Interactions
	Accessibility, food and accommodation		J. H. Jyotsna L. Prakash Sai, Sanjay Kumar Srivastava, Dr. G. Sridhar .M. Ravindranath, Dr. G.		
	Safety & Security		Joice K. Joseph, Sheikh Majedul Huq, Shriya P. Dalal, Dr. Pradeep Asthana, Pooja Pandey, Sanjay Kumar Srivastava, Amrita Ghosh		
2	Cognition, human activity, beliefs, social interaction	Space Experience	Ali Sadeghi Habibabad, Geoffery, Shilpa Sharma, Simmins, Agbonome, Peter Chukwuemeka, Amira Mersal Mahmoud, Tanvi Gupta		
3	Collective attachment, sensorial attachment, ambience	Place Attachment	Ali Sadeghi Habibabad, Geoffery Simmins, Agbonome, Peter Chukwuemeka, Shampa Mazumdar, Sanjoy Mazumdar		
4	Location, scenic beauty, heritage, visual appeal	Tourism	N.R. Vembu, M. Sivakumar, S. Srinivasan, G. Veeramani, S. Senthilvel, R. Vanitha, Shampa Mazumdar, Sanjoy Mazumdar, Sheikh Majedul Huq, Mst. Shuly Akter, Dr Pradeep Asthana, Pooja Pandey		

Table 1: Identifying the parameters of Pleasant Journey

surroundings—and all stimuli affecting one’s physical body—play a critical role in shaping experiences. All parameters that shape an individual’s perception of the environment are therefore considered, including the following dimensions.

Personal Frame: A single devotee is the smallest unit of the crowd. The emotions experienced by an individual in a crowd are highly contagious. It is well established that pleasure is strongly related to the environment (Sridhar 2008). The temple influences devotees’ behavior through the interplay of sensorial experiences, collective worship (Ray 2023), and knowing oneself (Patnayak 2019).

Spatial Affinity: The built form interacts with its users through its spaces. The pleasant journey of a temple can be elaborated through the first sensorial encounters that occur when seeing the majestic architecture of the temple complex, the serenity of the surroundings, and the warmth of community worship. The components of architecture and the spaces created within them

(Soltani 2019) are remembered through the activities performed and the cognitive processes involved in them (Mersal 2018), which together develop spatial affinity. In temples, these spaces help devotees connect with the temple complex; the stronger the connection, the more enhanced the experience and the greater the reduction in anxiety levels (T. Gupta 2024).

Reason to Visit: It is a well-validated finding that enhanced satisfaction results in more frequent visits to temple complexes (Vembu 2017). Environmental qualities (Jesurajan and Prabhu 2012), amenities, social interaction, perceived closeness to God (Rybina 2021), rituals (Aziz 2015), safety measures, and cultural value (Jyotsna 2022) are some of the pre-examined parameters in this regard. Based on the literature and field observations, the researchers grouped these parameters under this construct to examine their overall correlations.

The preceding discussion highlights that there is a relationship between these variables and pleasant

experience; however, their intercorrelations and the strength of these relationships, when grouped under the aforementioned heads in Table 2, still need to be assessed.

Hence, the following four hypotheses are proposed:

- a) Temple spaces such as kund (K), temple steps (TS), open spaces (OPS) and other shrines (OS) have a positive effect on spatial affinity
- b) Reasons such as Wish Fulfillment (WF), social interaction (SI), performing rituals (PR), tourism (T), and distress (D) have a positive effect on reason to visit
- c) Overall environment (OE), collective worship (CW), and self-realization (SR) positively contribute to personal enhancement of the devotee.
- d) The factors of spatial affinity, reason to visit, and personal frame are correlated and work together to influence the pleasant journey outcome.

To test these hypotheses, the questions presented to the devotees are detailed in Table 3.

2.2 Spiritual Journey (SJ)

After discussing the pleasant experiences that devotees

gather at a temple complex, it becomes essential to address their divine experiences. A visit to a temple complex typically arises from religious motivations (Vembu 2017). Externally, involves physical movement within the sacred enclosure; internally, it correlates with personal enhancement, the gaining of religious and cultural knowledge, and preferred rituals that foster spiritual growth (Baek 2022). These rituals, activities, and the spaces in which they occur coexist and significantly influence the formation of devotees' memories. The study proceeds with the intention of employing these spaces within the temple journey to foster a positive environment that increases contentment (T. Gupta 2024).

2.2.1 Derivation of indicators for Spiritual Journey

Personal Enhancement: In Hinduism, temples are considered sacred places that facilitate spiritual growth, rejuvenation, and connection with the divine (Aziz 2015). Temple spaces are ritually purified through ceremonial practices (Aziz 2015, Raddock 2011) and holy chants (Gokhale 2014). This sacred geometry (Afzhood 2022) is believed to generate extremely potent positive energy. The entire temple enclosure is considered sacred, and the merging of functional spaces through transition zones is thought to open up multiple layers of experience, guiding devotees from inner darkness toward the divine

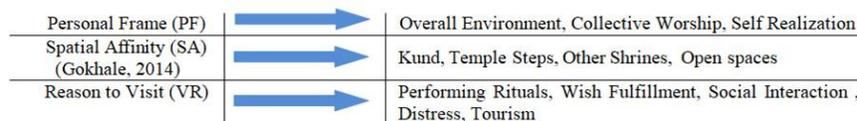


Table 2: Placement of parameters of Pleasant Journey under respective heads

FACTORS	INDICATORS	INDICATOR CODES	DETAILS
Spatial Affinity (SA)	Water Body / Kund	K	The most liked space for rituals as well as social interaction
	Temple steps	TS	The most liked space for rituals as well as social interaction
	Other shrines	OS	The most liked space after main shrine
	Open spaces	OPS	The most liked space for relaxing as well as social interaction
Main reason of Visit (VR)	Wish Fulfillment	WF	Temple is visited because of fulfillment of wish
	Social Interaction	SI	Temple is visited mostly for Deity Observance and to have relaxed time with friends
	Performing Rituals	PR	Temple is visited mostly for ritual performance
	Tourism	T	Came as tourist and so visited the temple
	Distress	D	Visited temple due to stress, anxiety, distress, in search of peace
Personal Frame (PF)	Overall Environment	OE	Overall environment inclusive of individual experience related to everything from transport to accessibility, behavior of native people, food, accommodation, facilities, infrastructure.
	Collective Worship	CW	The feeling of community worship, shared belief
	Self Realization	SR	The combined feeling of mantra, bhakti and Kriya

Table 3: Detailed explanation of Pleasant Journey indicators their codes.

through collective participation (Quinlan 2013). The temple is the home of the reigning deity, and the deity’s presence is believed to imbue the complex with divine energy. The dynamics of temple spaces, designed with precise mathematical calculations, align cosmic energy, amplify spiritual vibration (M.Rajakumari 2019), and reduce anxiety.

Rituals & Activities: Collective participation occurs through rituals that are categorized according to their religious importance as primary, secondary, recreational, and discretionary rituals (Verma 2021). The primary and secondary rituals are deity-centric and include practices such as observance and offerings. Recreational rituals aim at inner peace, whereas discretionary rituals are optional and depend on the preferences of individual devotees. These rituals and activities, performed within the complex, are key to creating experiential and sensorial attachments (Agbonome 2016).The temple layout, with its long corridors and large halls, allow sound to resonate and influences biorhythms (Kumar 2024). Consequently, devotional songs and hymns create a resonant field that harmonizes the devotee with the divine.

Revisit Intentions: The majestic form of the temple, often referred to as “devalaya,” helps to manifest the might of the Lord before devotees (Dwivedi 2019). The quiet setting encourages introspection, self-reflection, and spiritual satisfaction, resulting in renewal of the soul. All these emotions facilitate a sense of divinity (Vembu 2017) and closeness to God. This emotional satisfaction enhances the attractiveness of destination, while strong narratives (Chokshi 2018) support understanding of different cultures (Nguyen Viet 2021)

and traditions, thereby enriching religious knowledge (Ewa Dębicka-Borek 2022, Patwardhan 2019, Rizvi 2017). Spiritual experiences constitute a rational set of experiences (Jyotsna 2022) that include both cognitive and emotional encounters (Sadeghi Habibabad 2017). These encounters, together with the site’s cultural significance (Rybina 2021), shape the destination image (Huq 2021, Joseph 2020) and strengthen revisit intentions (Nguyen Viet 2021, Rohman 2021). The initial search therefore began with a detailed examination of spiritual experiences, rituals, and activities as presented in Table 4.

Temples are often likened to batteries that recharge drained souls and rejuvenate the mind and body. The architecture of temples also aligns the devotee’s energy with the energy of the divine universe. Therefore, meaningful participation becomes an important factor in achieving an enhanced experience. Community participation in various rituals and activities thus needs to be analyzed to develop a robust model. A spiritually satisfying temple journey combines enjoyment with the pursuit of a profound connection with the divine, leading to self -realization and positive transformative growth. In this context, the strength of the relationships among the factors of personal enhancement, revisit intentions, rituals, and activities needs to be evaluated. Based on these variables, the factors that were strongly related were grouped under single categories to examine the formation of ethereal experiences. This relationship is presented in Table 5, and the details of the indicators and their codes, in the form of questions, are presented in Table 6.

S.No	KEYSEARCHES	PARAMETERS UNDER WHICH KEYSEARCHES WERE PLACED	REVIEW OF LITERATURE	SUMMARY FOR SPIRITUAL JOURNEY	QUESTIONS FOR KEYSEARCHES
1	Spiritual.Impression.Revisit Intention/Satisfaction	Spiritual Experience/Destination Popularity	Barbara Nimri Aziz,J. H. Jyotsna,L. Prakashi Sai,Isnanda Zaimur Rohman,Bang Niguyenviet	The objectives achieved by all the paper demonstrated how devotee’s sacred journeys,closeness to God was influenced by the highlighted factors.The papers established the fact that devotees were spiritually satisfied if the destination was rich in religiosity, feeling of divinity and positive energy to calm the mind and soul.	1) Spiritual Attachment factors 2) Experience of space through activities. 3)Understanding of narratives 4) Physical form of the temple complex 5) Influence of religious and cultural value 7) Types of ritual 8) Participation in Rituals 9) Recommended Activities 10) Devotee Interaction 11) Religious Activities 12) Religious Discussions
	Contextualism		J. H. Jyotsna, L. Prakashi Sai,Mst. Shuly Aktar,Mohd Ahaan ,Bang Niguyenviet		
2	Form.Dimension,spaces,sacred elements,landscape areas,entry & exits,obstacles		Myung Eun Cho,Mi Jeong Kim,Ali Sadeghi Habibabad,Natalie Ricci		
3	Darshan,circumambulatory,functions of sacred space,transition		Manasi Chokshi,Urmi Chandnavaz,Tanisha Dutta,V. S. Adane,Professor Yatin Pandya		
4	Offering prayer,holy dip,time and frequency of ritual,movement during ritual.	Primary Ritual	Sanjay Kumar Srivastava,Barbara Nimri Aziz,Shampa Mazumdar,SanjoyMazumdar,ShilpaSharma, ShireeshDeshpande,Santosh Kumar,Ashish Verma Meghna Verma,Punyabeet Sarangi ,Vivek Yadav, Manoj M Anna Lise Seastrand		
	Listening to Hymns and bhajans.Discourse,reading holy books.meeting saints,erving food,religious socialization	Secondary Ritual	Ashish Verma Meghna Verma,Punyabeet Sarangi ,Vivek Yadav, Manoj M,Bernard Spilka,Nirmal Sharma (AIDMI)		
	Yoga,meditation,landscape areas,sacred water bodies,courtyard	Recreational Ritual	Albertina Nugteren,Amots Dafui,Ashish Verma Meghna Verma,Punyabeet Sarangi,William O. Beeman		
	Resting,sitting,eateries,non religious discussions,narratives and stories,photography,temple comple	Discretionary Ritual	Aniket Jadhav,Subhashini Kaligotta,Jodi Shaw,Kanchan Quinlan,AshishVerma,MeghnaVerma,Punyabeet Sarangi ,Vivek Yadav, Manoj M		

Table 4: Identifying the parameters of Spiritual Journey

Hence, the following hypotheses were formulated, and their codes and details are explained in Table 6:

e) Closeness to God (CL), deity darshan (DD), reduced anxiety (RAN), and gaining religious knowledge (GRK) enhance personal enhancement.

f) Grand form (GF), religious cultural value (RCV), and spiritual ambience (SA) strengthen revisit intentions.

g) Receiving bhog (RB), receiving aarti (RA), attending

path (AP), chanting (C), and offering to Lord (OL) are positively related to the most liked rituals.

h) Frequent preaching (FP), mandali (M), religious meal (RM), cultural events (CE), deity leela performance (DLP), and none (N) are positively related to activities.

i) Factors such as personal enhancement, revisit intentions, rituals, and activities are correlated and work together to influence the spiritual journey outcome.

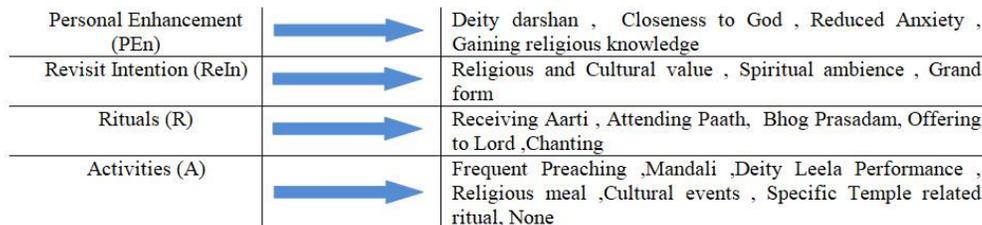


Table 5: Placement of parameters of Spiritual Journey under respective heads

FACTORS	INDICATORS	INDICATOR CODES	DETAILS
Personal Enhancement (PE)	Closeness to God	CG	The most liked space for rituals as well as social interaction
	Deity Darshan	DD	The most liked space for rituals as well as social interaction
	Reduced Anxiety	RA	The most liked space after main shrine
	Gaining Religious Knowledge	GRK	The most liked space for relaxing as well as social interaction
Revisit Intention (ReIn)	Grand Form	GF	The impact of architectural form and spaces on the devotee.
	Religious/ Cultural Value	RCV	Role of religious and cultural significance of temple, city on devotee
	Spiritual Ambience	SA	The spiritual satisfaction the devotee feels inside the temple complex.
Rituals (R)	Receiving Bhog	RB	Receiving Bhog Prasad (sweets) offered to Lord
	Receiving Aarti	RA	Receiving Aarti as a blessing
	Attending Paath	AP	Attending religious preaching delivered by priests/ gurus
	Chanting	C	Reciting hymns
	Offering to Lord	OL	Offering made to the Lord
Activities (A)	Frequent Preaching	FP	Frequent discourses by the teachers & mentors for the devotees
	Mandali	M	Religious songs sung by the native singers inside the complex
	Religious Meal	RM	Meal arranged by the management for the devotees
	Cultural Events	CE	Events highlighting the tradition of the place
	Deity Leela Performance	DLP	Events highlighting the glory of the Deity
	None	N	None activity incorporated other than deity darshan

Table 6: Detailed explanation of Spiritual Journey indicators their codes

2.3 Devotee Management(DM)

Hindu temple complexes welcome large mass gatherings because of their religious importance and the faith of millions. Given the high number of devotees within the temple enclosure, devotee management becomes crucial. Government agencies such as the National Institute of Disaster Management (NIDM) and the National Disaster Management Authority (NDMA 2014) have issued several guidelines for such scenarios, yet recurrent stampedes and stampede-like incidents (H. Sharma 2021, Nath 2023, Rawat 2022, Service 2022, V. Sharma 2022), including the recent stampede at the Mansa Devi temple in Haridwar (Bathla 2025), highlight significant gaps in the implementation of these guidelines (Prasun 2015). Overcrowding (Lee Ris S. 2005), safety concerns, limited opportunities to participate in rituals, the loss of close group members, suffocation, difficulty in navigation, lack of signage, long waiting times, and inadequate amenities not only reduce spiritual experience but also contribute to the development of negative behavior (Kingshott 2014, Zeitz 2009). Although these variables have been discussed in prior research, the current context requires a holistic model that includes every major and minor concern of devotees in order to design

2.3.1 Derivation of indicators for Devotee Management

Temple Precinct Experience: Managing the crowd (Joseph 2020) is relevant not only inside the shrine but also from the lockers onward, followed by the entrance portals (Prasunamba 2017). This dimension encompasses the overall experience of the precinct, including maintenance and cleanliness (Rohman 2021), adequacy of information about the site (Koski 2020), long waiting hours in queues (NDMA 2014, Wang 2019), and overcrowded entry and exit points (Almeida 2019, Prasun 2015).

Temple Shrine Experience: The most important movement in the temple complex is deity observance (Rybina 2021), followed by visits to sub-shrines and participation in the various activities before completing the journey. Deity observance typically follows a unidirectional flow of devotees through specific spaces (Lakr 2015). The desire to gain more time before the deity, to perform rituals, and to secure the best possible view, combined with the rush to reach other shrines first, can create crowd-related problems. Such behavior creates negative scenarios and may become uncontrollable under conditions of severe overcrowding (Singh 2020). To facilitate deity observance during heavy

S.No	KEYSEARCHES	PARAMETERS UNDER WHICH KEYSEARCHES WERE PLACED	REVIEW OF LITERATURE	SUMMARY FOR DEVOTEE MANAGEMENT	QUESTIONS FOR KEYSEARCHES
1	Overcrowding,crowd control,crowd behavior,crowd movement,security	Crowd Control	Vladislav Karbovskii, Oksana Severiukhina,P. G. Prasunamba,Dr. B. V. Muralidhar,Sanjay Kumar Srivastava ,Faisal T. Illiyas,Amrita Ghosh,Ankita Prasun + Prashansa Dixit(NDMA Guidelines)	All the papers clearly explained the terms like crowd density,crowd dynamics,planning processes undertaken before and during the event.Importance of queue management,signages and information dissemination,Papers related to Importance of use of simulation softwares in religious crowd gatherings and built forms other than temple complexeswere also included.	1) Security on normal days 2) Security on high footfall days 3) Intrusion of Personal space 4) Loss of person from the group 5) Devotee Management a) On normal days b) On festivities c) In Garbhagriha,mandapa 6) Proper Signage 7) Queue Formation 8) Clarity of route
2	Training of security personnel,mock drills,RFID,sensors,processors, display screen.	Awareness	Maria Moitinho de Almeida,Johan von Schreeb,Amrita Ghosh,Kathryn M. Zeitz,Heather M. Tan, M Grief, PC Couss,Christopher J. Zeitz		
3	Technology, expenses,pedestrian simulation,crowd science	Crowd Monitoring	Wenguo Wenga,Jiayue Wang,Dr.R.K.Dave,Lakshaya,Nomesh B. Boli,Dr Aldo Raineri		
4	layout of the area/venue, location of facilities, circulation routes, locations of entrances and exits should be specified to public,crowd density,crowd holding capacity	Venue Characteristics	Faisal T. Illiyas,Shibu K. Mani Naveen Babu,Sindhuja Kasthala,Harshit S. Lakra,Dr Aldo Raineri		
5	Risk reduction,risk management tools,crowd simulation models FMAEA model (NDMA)	Risk Assessment	P. G. Prasunamba,Dr. B. V.Muralidhar,Pradeepkumar,Keshav Mohan ,Upasana Sharma, B. R. Desikachari,Sankara Sarma,H. Gayathri		

Table 7: Identifying the parameters of Devotee Management. Based on the above variables the factors which were strongly related are placed in one category. The relation formed is explained in Table 8.The questions presented to devotees were based on these indicators are explained in Table 9.

standard operating procedures that ensure devotee safety. Crowd-management measures therefore need to be formulated at the planning stage and tested and evaluated on virtual platforms (Almeida 2019) before events commence. Remaining calm in a crowd is difficult when individual behavior is influenced by the group due to reduced interpersonal distance, and this parameter is important because it generates different outcomes in different scenarios (Sorokowska 2017).

footfall, numbers exceeding the venue's crowd-holding capacity (Ikibe J. H. 2018, Illiyas, Mani and and Babu 2020) are sometimes allowed into the main shrine, resulting in pushing, crushing, and trampling incidents (Lee Ris S. 2005). Restricted entry after long waiting hours, forced exits, and lack of awareness among devotees further exacerbate crowd-related risks.

Facilities & Amenities: This dimension is becoming one of the most important determinants of devotee experience because many crowd-related disasters (Zeitz 2009) arise from inefficient planning and execution, the lack of security and warning systems (Bhatt 2017, Lakr 2015, Prasunamba 2017), the behavior of security personnel (Alkhadim 2018, Koski 2020), ambiguous circulation patterns (Darfoon 2013, Raineri 2016). Poor legibility of signage, and inadequate availability of basic amenities such as drinking water (Darfoon 2013, Vembu 2017), shelter, and open spaces. The table 7 is a comprehensive illustration of the parameters and their details already documented in reference to religious crowd management.

The table 7 provides a comprehensive illustration of these parameters and their details as documented in the literature on religious crowd management

Hence, the following hypotheses are formulated:

j) Overcrowded entry and exit points (OEE), waiting time (WT), separate female/kid entry (FKE), and cleanliness of the temple complex (UTP) strongly influence the

temple precinct experience.

k) Overcrowded shrines (OS), limited or no opportunity to performing rituals (NP), feelings of confinement (C), and fear of losing a close group member (LP) have a strong influence on shrine experience.

l) Temple circulation and signage (CS), information dissemination (ID), drinking water (W), open areas such as landscape gardens (G), food and refreshments (R), other essential amenities (E), and sheltered seating spaces (SS) are critical components of devotee crowd management.

m) Factors such as temple precinct experience, temple shrine experience, and amenities are correlated and work together to influence the spiritual journey outcome.

The placement of the indicators under their respective headings resulted in a holistic model represented by the final questionnaire. The subsequent phase of the study involved verifying the validity of this model.

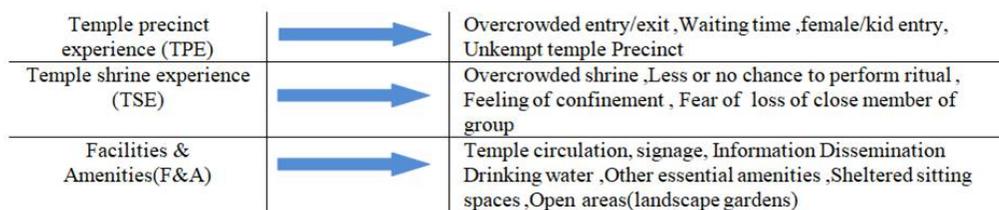


Table 8: Placement of parameters of Devotee Management under respective heads.

FACTORS	INDICATORS	INDICATOR CODES	DETAILS
Temple Precinct Experience (TPE)	Over crowded entry exit	OEE	The overcrowded entry and exit to the complex
	Waiting Time	WT	The long waiting hours for Deity observance
	Female Kid Entry	FKE	No provision for separate entry for female and kids
	Unkept Temple Precinct	UTP	The cleanliness and maintenance of temple precinct
Temple Shrine Experience (TSE)	Overcrowded shrine	OS	Lot of people at one time for Deity observance in the main shrine
	Fear of Loss of close person	LP	An effect of overcrowded shrine
	Feeling Confined	C	Hindrance of proximity, breathing trouble due to overcrowding
	Less or no chance to perform rituals	NR	Less or no chance at all no offer to Lord because of overcrowding or temple rules
Amenities (A)	Route Planning and Signage	CS	Lack of signage boards, or language issues to read the same.
	Information Dissemination	ID	Information given to devotees about waiting time, exit gates, changes in circulation
	Drinking water	W	Drinking water facility at suitable points
	Openspaces Gardens	G	Overall environment inclusive of individual experience related to everything from transport to accessibility, behavior of native people, food, accommodation, facilities, infrastructure.
	Food refreshments	R	The feeling of community worship, shared belief.
	Other essential	E	The combined feeling of mantra, bhakti and Kriya
	Sheltered sitting spaces	SS	Spaces allocated for sitting in coherence to all weathers

Table 9: Detailed explanation of Devotee Management indicators their codes

3. RESEARCH METHOD

Within the temple complex, the smallest unit of the religious crowd is the single devotee. Therefore, it is crucial to evaluate individual devotees' experiences of the pleasant journey, spiritual journey, and devotee management. The resulting model must consist of indicators categorized under their specific heads and should be evaluated as an integrated whole. The researchers intended to analyze interconnections within the entire model rather than focusing solely on the strength of the individual indicators. Consequently, Confirmatory Factor Analysis CFA (Steyer 2001, M. a. Tavakol 2020) was conducted using SPSS Amos 24. CFA encompasses tests of construct validity, a statistical process used to infer the extent to which a model accurately assesses the theoretical construct it is intended to measure (DiStefano 2005). The CFA results assess both the efficacy of the model and the strength of the relationships among indicators.

The model tested the variables under the heads: pleasant journey (PJ), spiritual journey (SJ), and devotee management (DM). To develop a questionnaire aligned with both existing literature and devotees' perceptions, the pilot study was conducted in two phases. The initial phase comprised 55 indicators derived from the literature review that were expected to impact the temple experience, and this was subsequently refined through engagement with devotees to gain insight into their perceptions of these variables. During this process, the devotees indicated that variables such as mental relaxation and peace produced the same feeling of positive energy. They also emphasized that receiving prasadam and receiving a religious meal were two distinct activities and strongly recommended analyzing them separately. Under supervisor guidance, the questionnaire was revised accordingly, resulting in a final version containing 45 indicators. The pilot study collected responses from 112 participants, of which 64 complete and unbiased responses were analyzed, yielding a response rate of 57%.

The number of indicators that remained under each head in the final questionnaire were as follows:

- i) Pleasant Journey: 12 indicators, which examined the extent to which devotees perceive the relevance of various indicators related to personal frame, spatial affinity, and reason to visit in an enhanced temple journey.
- ii) Spiritual Journey: 18 indicators, which examined the extent to which devotees perceive the relevance of various indicators related to personal enhancement, revisit intentions, rituals, and activities in an enhanced temple journey.

- iii) Devotee Management: 15 indicators, which examined the extent to which devotees perceive the relevance of various indicators related to temple precinct and shrine experience, as well as amenities, in an enhanced temple journey.

The temple is visited by thousands of devotees daily. It is flanked by numerous shops that provide items necessary for worship and rituals. The researchers approached devotees before deity observance while they were waiting in lines near the entrance portal of the shrine complex and also when they were resting at Mandir Chowk (an open area outside the main shrine complex), at sub-shrines, at eateries, and near the Ganga Ghaat. During the afternoon, when footfall was lower, the researchers interacted with devotees near these shops. Devotees from various regions, including foreign visitors and elderly individuals, were given explanations of the questionnaire to assist those who had difficulty understanding it, and the questionnaire was filled then completed either by the devotees or by the researchers on their behalf.

The researchers conducted a month-long study, gathering data in the morning, afternoon, and evening on weekdays, weekends, holidays, and festivals, including Masik Shivratri in December 2024. With verbal consent, responses were collected through random sampling from 389 participants, of which 200 useful responses (Gagne 2006, Grace-Martin 2021, Kyriazos 2018) were analyzed, yielding a response rate of 51%. The questionnaire consisted of two sections: i) generic details of the devotee, such as name, age, gender, and age group, and ii) questions related to temple experiences. Indicators of temple experiences were assessed using a five-point Likert scale where '1' represented strongly disagree, '2' disagree, '3' neutral, '4' agree, and '5' strongly agree. The target respondents for the questionnaire included local residents, pilgrims, protocol officers on duty, and temple priests.

Cronbach's alpha test is a measure of internal consistency that reflects the extent to which these items are interrelated as a scale. Accordingly, this test was conducted to assess the internal consistency and reliability of the questionnaire before it was administered to the devotees.

4. RESULT

To assess the robustness of the model, both reliability and validity tests were conducted. Before addressing the main research questions, Cronbach's alpha coefficients were examined, as it was essential to ensure the reliability of the indicators for correlational analysis,

given that the questionnaire used a Likert scale. In the Confirmatory Factor Analysis variances and covariances were analyzed using the maximum likelihood estimation method. The loading factor of one indicator per set was fixed at 1 to resolve scale indeterminacy.

Factor loadings for each indicator, as well as the relationship of indicators, were then calculated. The CFA results indicated that the factor structure fit the data well, supporting a three-factor model with 12 items for pleasant journey (PJ), a four-factor model with 18 items for spiritual journey (SJ), and a three-factor model with 15 items for devotee management (DM).

4.1 Data analysis

4.1.1 Reliability Test

Cronbach’s alpha was used to assess internal reliability, and the resulting coefficients—0.834 for PJ, 0.899 for SJ, and 0.823 for DM—were all above the accepted threshold of 0.70 (Jugessur 2022). In the preliminary stage of CFA, composite reliability (CR) was evaluated to examine internal consistency, and Average Variance Extracted (AVE) was calculated to determine the extent to which the indicators accurately reflected their respective constructs.

The values for AVE and CR were ≥ 0.50 and ≥ 0.70 , respectively, and the condition of $CR > AVE$ was also satisfied (Edison 2020,). For pleasant journey, AVE and CR ranged from 0.541 to 0.643 and CR from 0.822 to

FACTORS	NO OF INDICATORS	CRONBACH ALPHA	C.R.	A.V.E
Spatial Affinity	4	0.834	0.822	0.541
Main reason of visit	5		0.871	0.577
Personal Frame	3		0.842	0.643
Personal Enhancement	4	0.899	0.826	0.544
Revisit Intention	3		0.772	0.534
Most Liked Ritual	5		0.903	0.652
Activity	6		0.917	0.651
Temple Precinct Experience	4	0.823	0.798	0.500
Temple Shrine Experience	4		0.838	0.570
Amenities	7		0.877	0.515

Table 10: Details of Cronbach Alpha, composite reliability, and variance of the three heads of questionnaire.

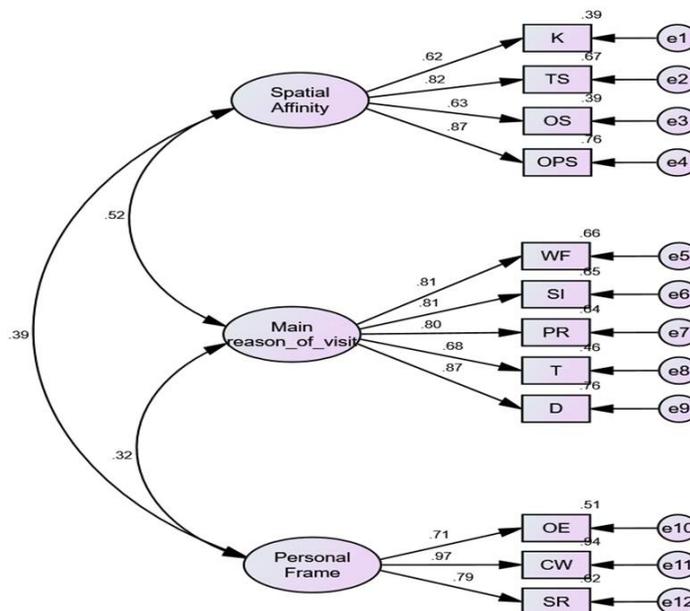


Figure 3: Three Factor Model with indicators, factor loadings, standard regression weights, and variances.

Type of Test	Name of Test	Level of Acceptance	Result
Parsimonious Fit	CMIN	CMIN/DF < 3	2.182
Absolute Fit	RMR, GFI & AGFI	0.90 ≤ GFI < 0.95 AGFI > 0.80 RMR < 0.5	GFI = 0.916 AGFI = 0.872 RMR = 0.064
Incremental Fit	PCFI	PNFI ≥ 0.50 PCFI ≥ 0.50	PNFI = 0.71 PCFI = 0.737
Absolute Fit	RMSEA	0.5 > RMSEA < 0.08	RMSEA = 0.077
Incremental Fit	CFI & NFI	CFI > 0.95 NFI ≥ 0.90	CFI = 0.953 NFI = 0.918

Table 11: Result of Confirmatory Factor Analysis Model Fit Indices for Pleasant Journey

0.871. For Spiritual Journey, AVE ranged from 0.534 to 0.652 and CR from 0.826 to 0.917. For devotee management, AVE ranged from 0.500 to 0.570 and CR from 0.798 to 0.838. Accordingly, the values reported in Table 10 were deemed acceptable.

1.1.1 Pleasant Journey – Path Analysis

The factor model in CFA is used to test the strength and direction of relationships between latent factors and their indicators. Under this heading, the relationships between the three factors and their corresponding indicator variables were examined. The results are presented in the path diagram is shown in Figure 3.

4.1.3 Construct Validity

Validity specifies the extent to which a model effectively measures what it is intended to measure. It also provides a basis for evaluating the appropriateness of conclusions drawn from applying the model to a specific population at a given point in time (André 2012).

In CFA, validity is assessed through various tests that evaluate the degree to which the data fit the hypothesized model. Key indices for this evaluation includes Chi-square minimum (CMIN), root mean square error of approximation (RMSEA), root mean residual (RMR), goodness of fit index (GFI), and adjusted goodness of fit index (AGFI), comparative fit index (CFI), normed fit index (NFI), and parsimony comparative fit index (PCFI) (Ozturk 2011).

The model met accepted thresholds (Table 11), with CMIN = 2.182, GFI = 0.916, RMR = 0.064, AGFI = 0.872, PCFI = 0.737, RMSEA = 0.077, CFI = 0.953, and NFI = 0.918. All of these values satisfied the required levels (Haba 2018, Nayak 2018).

4.1.4 Correlations Matrix of latent factors

The next important step was to check the strength of the relationships among the constructs themselves. The correlation analysis presented in Table 12 suggested an essential to strong relation between spatial affinity and the main reason for visit, whereas the relationship between spatial affinity, main reason for visit, and personal frame was of moderate strength (Lušňáková Zuzana 2019).

The next phase of the analysis involved probing more deeply into the model to evaluate its robustness. At this stage, robustness was assessed by interpreting the factor loadings and the squared multiple regression coefficients (R²) in the model (Figure 3). Factor loadings (standardized regression weights, denoted by beta) indicate the strength and direction of the association between indicators and their respective constructs, while squared multiple correlations (the square of the factor loadings) represent the proportion of variance in each indicator accounted for by its construct (M. a. Tavakol 2020).

Systematically, Table 13 shows a positive and significant relationship between each factor and its indicators. The

CORRELATIONS		ESTIMATE	
Spatial Affinity	<-->	Main reason of visit	0.522
Spatial Affinity	<-->	Personal Frame	0.39
Main reason of visit	<-->	Personal Frame	0.317

Table 12: Correlation estimate of latent factors

PLEASANT JOURNEY INDICATORS	FACTOR LOADING (β)	SQUARED MULTIPLE CORRELATIONS (R^2)	P-VALUE
SPATIAL AFFINITY			
Evaluate kund as the most liked space for rituals as well as social interaction	0.622	0.387	***
Evaluate temple steps as most liked space for rituals as well as social interaction	0.818	0.668	***
Evaluate other sub-shrines as most liked space after main shrine	0.626	0.392	***
Evaluate open spaces as the most liked space for relaxing as well as social interaction	0.874	0.764	***
MAIN REASON OF VISIT			
Evaluate fulfillment of wish as the main reason of visit to the temple.	0.813	0.661	***
Evaluate social interaction as the main reason of visit to the temple.	0.808	0.653	***
Evaluate performing rituals as the main reason of visit to the temple.	0.8	0.64	***
Evaluate tourism as the main reason of visit to the temple.	0.681	0.464	***
Evaluate distress as the main reason of visit to the temple.	0.875	0.507	***
PERSONAL FRAME			
Evaluate overall environment for positive experience individually	0.712	0.935	***
Evaluate collective worship for positive experience individually	0.967	0.619	***
Evaluate self realization for positive experience individually	0.786	0.765	***

Table 13 : Analysis of Structure model with questions, factor loading, squared multiple correlations and significant value

most dominant indicator is collective worship, with a beta of 0.967 ($p=0.000<0.05$), followed by distress, with a beta of 0.875 ($p=0.000<0.05$).

Within spatial affinity, open spaces ($\beta=0.874$, $p=0.000<0.05$), temple steps ($\beta=0.818$, $p=0.000<0.05$), other shrines ($\beta=0.626$, $p=0.000<0.05$), and Kund ($\beta=0.622$, $p=0.000<0.05$) exhibit strong relationships with the construct. These spaces can therefore be prioritized as participatory spots, as illustrated in Figure 2.

The squared multiple correlations indicate that 93.5% of the variance in overall environment and 76.5% of the variance in self-realization are explained by Personal Frame (PF). Additionally, 76.4% of the variance in open spaces is attributed to Spatial Affinity (SA). Taken together, the construct validity evidence, correlation matrix, and model fit indices (factor loadings and squared multiple correlations) demonstrate that the model for pleasant journey (PJ) has good reliability and is suitable for analyzing devotees' pleasant journey.

The CFA results further confirm that all hypotheses formulated for pleasant journey (PJ) are supported.

4.2 Spiritual Journey

4.2.1 Construct Validity

Like the pleasant journey construct, CFA for this set was also conducted using the maximum likelihood method. Before generating of the factor model, validity was examined (Table 14), yielding CMIN = 1.877 (< 3), RMR = 0.074 (< 0.5), GFI = 0.866 (= 9), AGFI = 0.849 (>0.80), PCFI = 0.803 (>0.50), RMSEA = 0.066 (<0.5), CFI = 0.953 (≥ 0.95), and NFI = 0.905 (>0.90). All indices satisfied the required acceptance criteria (Table 14) (Rodríguez-Santero 2020), indicating that the data aligned well with the hypothesized model.

4.2.2 Correlations Matrix of latent factors

The correlation matrix in Table 15 indicates a strong relationship between personal enhancement and rituals (62%). It also shows a moderate to essential relationship between rituals and activities (48.2%) and between activities and personal enhancement (48%), as well as a moderate relationship between revisit intentions, activities, and rituals (Lušňáková Zuzana 2019).

The proposed model, when evaluated against the independent (null) model, yielded a factor structure in which each item loaded onto a single latent factor (Figure 4).

The path analysis done in Table 16 established positive

Type of Test	Name of Test	Level of Acceptance	Result
Parsimonious Fit	CMIN	CMIN/DF < 3	1.877
Absolute Fit	RMR, GFI & AGFI	0.90 ≤ GFI < 0.95 AGFI > 0.80 RMR < 0.5	GFI=0.866 AGFI=0.849 RMR=0.074
Incremental Fit	PCFI	PNFI ≥ 0.50 PCFI ≥ 0.50	PNFI=0.763 PCFI=0.803
Absolute Fit	RMSEA	0.5 > RMSEA < 0.08	RMSEA=0.066
Incremental Fit	CFI & NFI	CFI > 0.95 NFI ≥ 0.90	CFI=0.953 NFI=0.905

Table 14: Result of Confirmatory Factor Analysis Model Fit Indices for Spiritual Journey.

	CORRELATIONS		ESTIMATE
Personal Enhancement	<-->	Revisit Intention	0.393
Personal Enhancement	<-->	Most Liked Ritual	0.621
Personal Enhancement	<-->	Activity	0.476
Revisit Intention	<-->	Most Liked Ritual	0.345
Revisit Intention	<-->	Activity	0.307
Most Liked Ritual	<-->	Activity	0.482

Table 15: Correlation estimate of latent factors

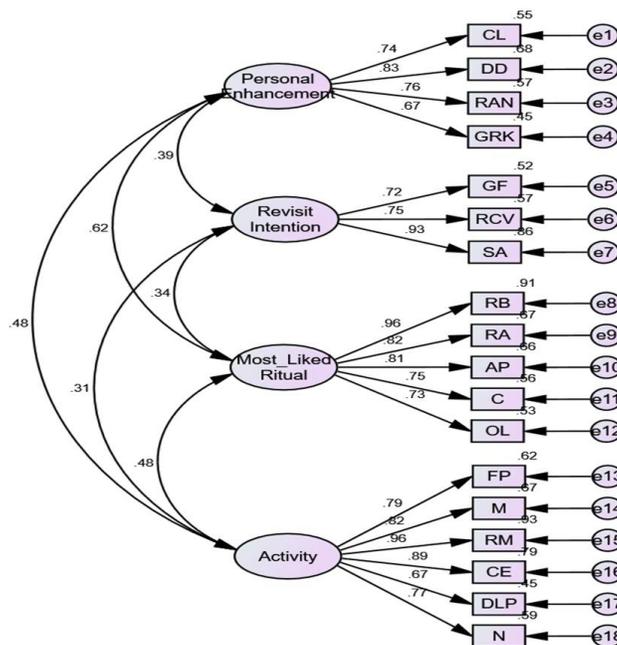


Figure 4: Four Factor Model with indicators, factor loadings, standard regression weights and variances

SPIRITUAL JOURNEY INDICATORS	FACTOR LOADING (β)	SQUARED MULTIPLE CORRELATIONS (R^2)	P-VALUE
PERSONAL ENHANCEMENT			
Evaluate closeness to God for positive spiritual experience for personal enhancement.	0.741	0.55	***
Evaluate Deity observance for positive spiritual experience for personal enhancement.	0.826	0.683	***
Evaluate reduced anxiety for positive spiritual experience for personal enhancement.	0.757	0.573	***
Evaluate gaining religious knowledge for positive spiritual experience for personal enhancement.	0.669	0.448	***
Evaluate gaining religious knowledge for positive spiritual experience for personal enhancement.	0.741	0.55	***
REVISIT INTENTIONS			
Evaluate grand form as the main reason that strengthens revisit intentions.	0.722	0.522	***
Evaluate religious & cultural value as the main reason that strengthens revisit intentions.	0.753	0.568	***
Evaluate spiritual ambience as the main reason that strengthens revisit intentions.	0.929	0.864	***
MOST LIKED RITUAL			
Evaluate receiving Prasad bhog as the most liked ritual	0.955	0.912	***
Evaluate receiving aarti as the most liked ritual	0.817	0.667	***
Evaluate attending paath as the most liked ritual	0.81	0.657	***
Evaluate chanting as the most liked ritual	0.751	0.563	***
Evaluate offering Lord as the most liked ritual	0.731	0.534	***
ACTIVITY			
Evaluate discourse as the most liked activity to be conducted frequently.	0.787	0.62	***
Evaluate religious songs as the most liked activity to be conducted frequently.	0.819	0.671	***
Evaluate religious meals as the most liked activity to be conducted frequently.	0.962	0.925	***
Evaluate cultural events as the most liked activity to be conducted frequently.	0.889	0.79	***
Evaluate Deity leela performance as the most liked activity to be conducted frequently.	0.674	0.455	***
Evaluate if you fell there is no need of any activity to be conducted frequently.	0.767	0.588	***

Table 16 : Analysis of Structure model with questions, factor loading, squared multiple correlations and significant value

and significant relationships between the factors and their indicators. The standardized regression weights (beta) identified religious meal as the most dominant indicator, with a high predictive value of 0.962. Receiving prasada (0.955), spiritual ambience (0.929), and cultural events (0.889) were ranked second, third, and fourth, respectively.

The squared multiple correlations showed that 92.5% of the variance in religious meal was explained by the activity construct, 91.2% of the variance in receiving bhog/prasada was explained by activity, and 86.4% of

the variance in spiritual ambience was explained by revisit intention (ReIn). Additionally, 79% of the variance in cultural events was explained by activity.

The CFA for spiritual journey indicated that the model was suitable for further analysis and that the associated hypotheses were supported.

Type of Test	Name of Test	Level of Acceptance	Result
Parsimonious Fit	CMIN	CMIN/DF < 3	1.934
Absolute Fit	RMR, GFI & AGFI	0.90 ≤ GFI < 0.95 AGFI > 0.80 RMR < 0.5	GFI = 0.904 AGFI = 0.868 RMR = 0.102
Incremental Fit	PCFI	PNFI ≥ 0.50 PCFI ≥ 0.50	PNFI = 0.752 PCFI = 0.789
Absolute Fit	RMSEA	0.5 > RMSEA < 0.08	RMSEA = 0.069
Incremental Fit	CFI & NFI	CFI > 0.90 NFI ≥ 0.90	CFI = 0.952 NFI = 0.907

Table 17: Result of Confirmatory Factor Analysis Model Fit Indices for Devotee Management

CORRELATIONS			ESTIMATE
Temple Precinct Experience	<->	Temple Shrine Experience	0.15
Temple Precinct Experience	<->	Amenities	0.174
Temple Shrine Experience	<->	Amenities	0.171

Table 18: The correlation table of latent factors

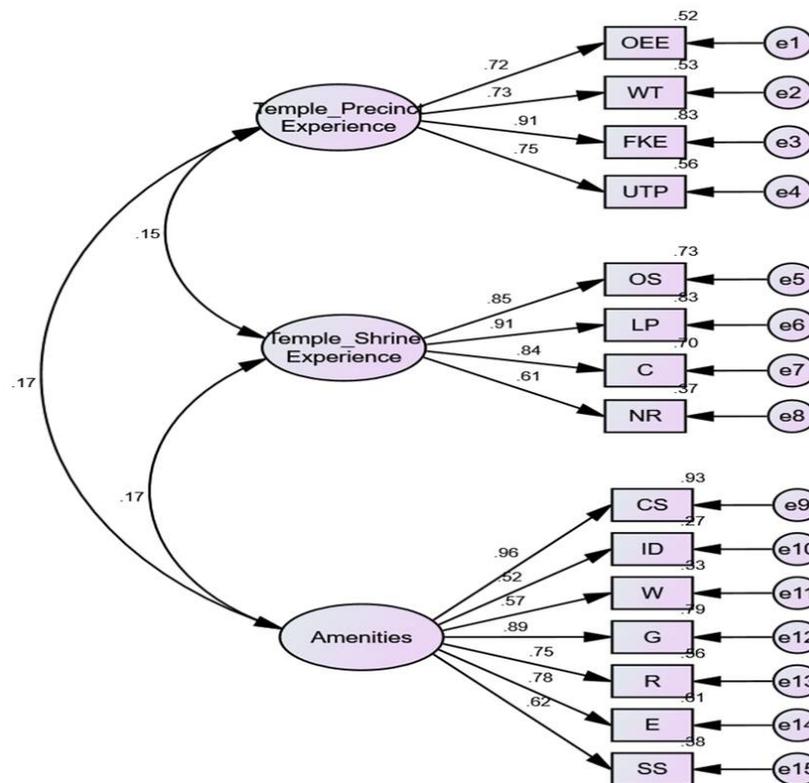


Figure 5: Three Factor Model with indicators, factor loadings, standard regression weights and variances

4.3 Devotee Management

4.3.1 Construct validity

The model displayed a good fit, with CMIN = 1.934 (< 3), RMR = 0.102 (< 0.5), GFI = 0.904 (equal to 9), AGFI = 0.868 (>0.80), PCFI = 0.789 (>0.50), RMSEA = 0.069 (<0.5), CFI = 0.952 (≥0.95), and NFI = 0.907 (>0.90) (Table 17).

4.3.2 Correlations Matrix of latent factors

The correlations matrix (Table 18) showed positive but weak relationships among the latent factors. In any religious complex, pleasant and spiritual experiences are most important for devotees because these are the dimensions through which they personally feel positivity. Management measures, by contrast, are primarily the responsibility of the authorities and tend to become noticeable to devotees mainly during periods of high footfall. In controlled environments, a correlation below 0.2 is generally considered low to medium (Lušňáková

Zuzana 2019). While this statistic offers general guidance, such correlations remain crucial for evaluating complex human behaviors that involve environmental conditions, social interactions, and personal psychology. During medium to high footfalls, eagerness to be first and to gain maximum time for deity observance can lead to pushing and crushing. At such moments, factors that appear only weakly correlated play a significant role in identifying potential risk factors and designing effective interventions. Recent news of religious crowd-related disasters, as discussed earlier, highlights gaps in the management system and underscores the need for a comprehensive review of management policies and frameworks. Therefore, the researchers decided to extend the study and proceed to the next phase. The three-factor model displaying the strength of indicators and variances for the devotee management is shown in Figure 5.

The regression-weights analysis in Table 19 established positive and significant relationships between the latent factors and their indicators. The standardized regression

DEVOTEE MANAGEMENT INDICATORS	FACTOR LOADING (β)	SQUARED MULTIPLE CORRELATIONS (R ²)	P-VALUE
TEMPLE PRECINCT EXPERIENCE			
Evaluate overcrowded entry /exit as a factor that influence precinct experience	0.72	0.518	***
Evaluate waiting time as a factor that influence precinct experience	0.726	0.527	***
Evaluate no provision of separate female/kid entry as a factor that influence precinct experience	0.912	0.832	***
valuate precinct cleanliness as a factor that influence precinct experience	0.747	0.558	***
TEMPLE SHRINE EXPERIENCE			
Evaluate overcrowded shrine as a factor that influence shrine experience	0.853	0.728	***
Evaluate fear of loss of close person as a factor that influence shrine experience	0.913	0.833	***
Evaluate feeling of confinement as a factor that influence shrine experience	0.837	0.701	***
Evaluate less or no chance of performing rituals as a factor that influence shrine experience	0.61	0.372	***
Evaluate overcrowded shrine as a factor that influence shrine experience	0.853	0.728	***
AMENITIES			
The route planning/signage board are adequate in the complex. Evaluate	0.964	0.928	***
The information dissemination procedures are adequate in the complex. Evaluate	0.517	0.267	***
There is planned drinking facility within the complex. Evaluate	0.571	0.326	***
Evaluate the satisfaction level with open spaces and gardens within complex.	0.89	0.792	***
Evaluate the satisfaction level with food and refreshments facilities within complex.	0.745	0.556	***
Evaluate the essential facilities like cloak room, restroom facilities within complex.	0.783	0.613	***
Evaluate the sheltered sitting spaces facilities within complex.	0.617	0.381	***

Table 19 : Analysis of Structure model with questions, factor loading, squared multiple correlations and significant value

weight (beta) showed that route planning and signage (0.964) was the most dominant indicator, with 92.8% of its variance explained by the amenities construct. Open spaces and gardens (0.89) followed, with 79% of their variance explained by amenities. Separate entry for women and children (0.912) ranked highest for temple precinct experience, with 83% of its variance explained by that construct. Loss of a close person (0.913) emerged as the most dominant indicator for temple shrine experience, with 83% of its variance explained by shrine experience. Overcrowded shrine (0.85) ranked second, with 73% of its variance explained by shrine experience.

The factor loadings for information dissemination and drinking water were relatively low, but these indicators were retained in the model because their values exceed 0.50 (Cheung 2024). With the transformation of the Kashi Vishwanath shrine into Kashi Vishwanath Dhaam, the complex has been equipped with many amenities, such as drinking water, food, and toilets. The complex also offers ample shaded areas where devotees can sit and rest, and the toilet and drinking water facilities are generally adequate. However, when the complex is overcrowded, it becomes difficult to keep spaces clean and dry. Therefore, many devotees chose neutral responses, recognizing the challenging task of keeping the space clean though still feeling dissatisfied. Similarly, although the complex has an efficient information dissemination system, interactions with devotees revealed that language barriers contributed to lower estimates for this indicator. The CFA results for devotee management showed strong factor loadings overall, and the three associated hypotheses were therefore accepted.

5. CONCLUSION

This study, using a questionnaire survey, demonstrates the influence of pleasant journey, spiritual journey, and devotee management on enhanced temple experience through Confirmatory Factor Analysis. The model was developed following an in-depth literature review and a pilot study, with selected indicators organized under their respective heads. Thirteen hypotheses were proposed, all of which were supported by the analysis. The findings also confirmed the strength of the indicators and the correlations among the constructs. While several indicators have been corroborated in earlier research, this study is distinctive in emphasizing the validity and reliability of a holistic measurement of temple experience.

The CFA model indicators highlighted a close fit with the sample, with all indicators showing significant loadings and substantial correlations. Reliability and validity tests—including Cronbach’s alpha, composite reliability, and AVE—exceeded accepted thresholds, indicating that the measures are dependable and relatively free from measurement error.

In every temple complex, primary emphasis is placed on veneration of and rituals for the reigning deity, followed by religious rituals and activities associated with other deities. The conventional circulation typically involves deity observance, circumambulation, visits to subsidiary shrines, and participation in religious activities, culminating at the exit portal. Although temple spaces and rituals may carry different names in different regions of the country, this conventional pattern of circulation remains broadly consistent. For this reason, Kashi Vishwanath Dham, located in the cultural capital of Varanasi, was selected as the study

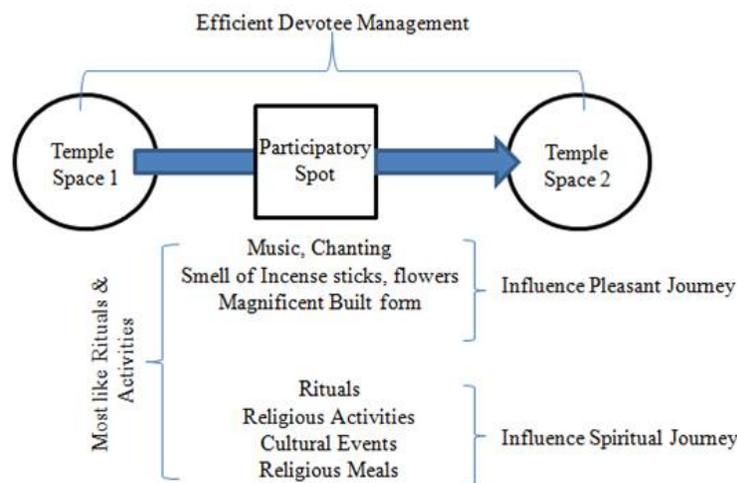


Figure 6: Influence of Participatory Spots on Pleasant Journey, Spiritual journey, and Devotee Management.

site, as it has undergone a major transformation from a cluster of single-cell temples into a magnificent temple complex that continues to attract large footfall.

According to the theoretical findings, the measurement model is both valid and reliable. Moreover, the complete measurement model can be practically implemented in other temple complexes to foreground key components—such as preferred rituals, activities, and management measures—organized in the most liked spaces, which can function as participatory spots along the temple journey to enhance devotee experience.

The scale is designed to assess devotees' experiences in temple complexes that hold high religious and cultural value, assuming a shared faith in the deity among followers of the same religion. The main variables in the questionnaire are intentionally generic, while sub-variables capture region-specific rituals and activities in greater detail so they can be readily adapted to local contexts and terminology.

To gain a comprehensive understanding of devotees' experience, the study highlights several key points:

Placement of Spaces: The main shrine in Hindu temple complexes is typically oriented toward the east. The temple journey starts at the entrance portal and concludes at the exit portal, involving movement through different mandapas to reach the main shrine. Once deity darshan is complete, devotees are free to visit other spaces such as sub-shrines, sacred water bodies, and open spaces, among others. Within the sacred enclosure, the symbolic significance of these architectural spaces is consistent, although this becomes clearer through area-specific terminology. The monumental scale of temples in ancient times depended on (i) the available land and (ii) the financial investment of the patron king, which is why temple complexes vary in scale. In light of this, the questionnaire focuses on (i) the pleasant and spiritual emotions experienced and (ii) spatial affinity, measured as the time spent in each space, rather than emphasizing physical dimensions alone.

Cultural context: The activities and rituals in a temple complex are context dependent. This dimension underpins place attachment, with local traditions playing a significant role and making spaces more interactive. The questions should therefore incorporate the local language and dialect of the region.

For example, in the "most liked ritual" item, Mahaprasad in the Jagannath Temple (Odisha) would be replaced by Prasad in the Meenakshi Temple (Madurai) and by receiving Prasad in the Kashi Vishwanath Temple (Varanasi). Similarly, items on "most liked activities"

should employ native terms. The questionnaire should be prepared in English, Hindi, and the relevant regional language.

The questionnaire can provide valuable insights into strategies used for crowd management and the deployment of advanced tools for crowd monitoring. The resulting findings can identify best practices for devotee safety through comparative analysis, which can then be implemented in other temple complexes.

Completion of the analysis will help specify parameters for key spaces and support their transformation into activity-driven areas. Such spots can reduce negative emotions and facilitate pleasant spatial transitions, even during long waits and heavy crowds (Figure 6). The analysis highlighted open spaces and temple steps as the most liked areas, followed by sub-shrines and sacred water bodies. Cultural activities such as devotional music, chanting, deity leela performances, and traditional dance can be organized in these locations to enhance interaction.

Positive memories are created when a devotee feels comfortable in the physical surroundings, experiences spiritual satisfaction, and faces no safety concerns for themselves or close companions. These three conditions are distinct yet highly interrelated, and this study incorporates all of them—through detailed parameters—to understand the temple journey from devotees' perspectives.

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