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Development And Validation Of The Integrated Yoga Module (IYM) For Diabetes: Content Validity Approach

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Abstract:
Using a content validity method, the current study sought to create and evaluate an Integrated Yoga Module (IYM) especially intended for the treatment of diabetes. The module was methodically created using a multi-phase approach to guarantee its practical viability, therapeutic relevance, and scientific rigor. In Phase I, a thorough literature search of randomized controlled trials published on PubMed between 2014 and 2024 was used to identify yoga practices. Additionally, institutional protocols from the Morarji Desai National Institute of Yoga (MDNIY), traditional yoga literature, especially B.K.S. Iyengar's Light on Yoga, and professional advice from yoga experts were consulted. The first pool of practices consisted of 21 pertinent studies. The selected practices were divided into five main categories in Phase II: Bandha, Kriya, Asana, Pranayama, and Mudra. The finished IYM has a strong emphasis on yoga techniques that promote pancreas function, boost endocrine balance, improve glucose metabolism, and lessen hyperglycemia brought on by stress. Certain asanas like Surya Namaskar, Mandukasana, Ardha Matsyendrasana, and Sarvangasana are included in the module, along with pranayama methods like Anulom Vilom and Bhramari, cleaning techniques like Kapal Bhati and Agnisar, therapeutic mudras, and Uddiyana Bandha among others. Twenty yoga practitioners with at than five years of experience in yoga therapy or teaching served as an expert panel to validate the content in Phase III. Each method was assessed by experts for safety and applicability in the treatment of diabetes. The IYM's viability and content validity were validated by the high degree of expert agreement. The validated module offers a solid basis for upcoming clinical trials evaluating its effectiveness on glucose control and metabolic health and can function as a standardized, non-pharmacological supplement for diabetes management.

Keywords:
Integrated Yoga Module; Diabetes; Content Validity; Asana; Pranayama; Kriya; Mudra; Bandha; Yoga Therapy; Non-Pharmacological Intervention

1.0. Introduction:

Persistent hyperglycemia brought on by decreased insulin secretion, action, or both is a hallmark of diabetes, a chronic metabolic disease. Its rising incidence, especially in emerging nations like India, is a serious public health concern because of long-term consequences that impact the neurological, endocrine, cardiovascular, and renal systems. Lifestyle-based therapies that emphasize physical activity, stress management, and

metabolic regulation are becoming more and more acknowledged as crucial elements of complete diabetes care, in addition to medication management. In this regard, yoga has become a holistic, economical, and scientifically validated therapeutic strategy **(Innes, K. E., & Vincent, H. K. 2007).**

Yoga is a classic mind-body discipline that incorporates hand gestures (Mudra), energy locks (Bandha), physical postures (Asana), breathing exercises (Pranayama), cleaning techniques (Kriya), and relaxation. Research from randomized controlled trials indicates that yoga-based therapies can help people with type 2 diabetes improve their body composition, lipid profile, insulin sensitivity, glycemic management, and psychological well-being. Certain poses, such Mandukasana, Ardha Matsyendrasana, Paschimottanasana, and Sarvangasana, which include abdominal compression, forward bending, inversion, and spine twisting, are said to promote pancreas function, improve visceral circulation, and balance endocrine activity. Savasana and other relaxation techniques also aid in lowering stress-induced cortisol release, which is a major contributor to glucose dysregulation **(Gordon, L. 2008).**

By modulating the autonomic nerve system, pranayama techniques like Anulom Vilom, Bhramari, and Sheetali/Sitkari enhance parasympathetic dominance and lower oxidative stress. Likewise, Kriyas such as Agnisar and Kapal Bhati aid in metabolic activation and abdominal organ toning. By controlling pranic flow and offering deep visceral massage, bandhas and mudras enhance these benefits and promote insulin synthesis and metabolic equilibrium. Standardized institutional guidelines from the Morarji Desai National Institute of Yoga (MDNIY) and classical yoga literature, such as B.K.S. Iyengar's Light on Yoga, highlight the therapeutic value of these practices for metabolic illnesses **(Iyengar, B. K. S. 2015).**

Reproducibility and clinical translation are hampered by the variation in yoga interventions among research studies, despite mounting evidence. Thus, there is a great demand for an Integrated Yoga Module (IYM) that is especially designed for diabetes management and has been methodically researched and validated. By establishing content validity by expert consensus, the scientific basis for future clinical application and research is strengthened and the chosen procedures are guaranteed to be pertinent, safe, and practicable.

2.0. Literature Review:

Yoga has drawn a lot of attention in the last 20 years as a useful supplemental treatment for type 2 diabetes and other forms of diabetes. Yoga practices have been shown in an increasing amount of scientific research to improve body composition, lipid metabolism, insulin sensitivity, glycemic control, and psychological well-being. Following structured yoga programs, randomized controlled trials (RCTs) and systematic reviews consistently indicate lower levels of HbA1c, postprandial glucose, and fasting blood glucose **(Innes, K. E., Selfe, T. K., & Taylor, A. G., 2008)**

The majority of yoga regimens for diabetes are centered around asana-based therapies. Abdominal compression, spinal flexion, extension, twisting, and inversion are postures that are thought to increase visceral circulation, stimulate the pancreas, and control endocrine gland function. Practices like Surya Namaskar, Mandukasana, Ardha Matsyendrasana, Paschimottanasana, Bhujangasana, Dhanurasana, and Sarvangasana have been shown in studies to have substantial metabolic advantages. These poses enhance hepatic glucose metabolism, lessen insulin resistance, and encourage mechanical massage of the abdominal organs. It has been demonstrated that savasana relaxation reduces cortisol levels and sympathetic hyperactivity, avoiding stress-induced hyperglycemia.

The effects of pranayama techniques on autonomic balance and metabolic efficiency have been thoroughly investigated. It has been observed that methods like Bhramari and Anulom Vilom (Nadi Shodhana) improve glucose utilization, lower oxidative stress, and increase parasympathetic tone. In addition to reducing stress and promoting thermoregulation, cooling pranayamas such as Sheetali and Sitkari also indirectly enhance metabolic balance in diabetics **(Thangasami, S. R., Chandani, A. L., & Thangasami, S., 2015).**

Yoga-based diabetic therapies often incorporate cleansing practices (Kriya), including Kapal Bhati and Agnisar. Research indicates that these methods enhance the fire of the digestive system, activate the organs in the abdomen, and help with insulin sensitivity and weight control. Although they are not as commonly studied on their own, mudras like Prana Mudra, Surya Mudra, and Apana Mudra are typically thought of as supportive practices that, when paired with asana and pranayama, regulate pranic flow and metabolic activity. In a similar vein, Bandhas, particularly Uddiyana Bandha, are said to stimulate digestive and pancreatic processes and offer deep visceral massage **(Cui, J., Yan, J. H. et al., 2017).**

Certain therapeutic uses of these techniques for metabolic illnesses are described in classical yoga literature, most notably Light on Yoga by B.K.S. Iyengar. Their clinical value is further supported by institutional guidelines issued by the Morarji Desai National Institute of Yoga (MDNIY). The need for a methodically created and content-validated Integrated Yoga Module (IYM) for diabetes is highlighted by the fact that current research reveals variation in yoga modules, length, and content **(Gordon, L., Morrison, et al., 2008).**

3.0. Methodology:

In order to develop and validate an Integrated Yoga Module (IYM) for the management of Diabetes utilizing a content validity approach, the current study used a methodical, multi-phase methodology. The approach was created to guarantee clinical viability, therapeutic relevance, and scientific authenticity.
This study was divided into four phases: -

Phase I: Yoga Practice Identification (Search for Literature) Related to Yoga and Diabetes

To find yoga poses that are helpful for managing diabetes, a thorough literature search was done. Using terms like "yoga therapy for diabetes" and "yoga module for diabetes," peer-reviewed research was found in PubMed. The search was confined to free full-text articles and randomized controlled trials published between 2014 and 2024. Twenty-one papers that specifically discussed the therapeutic role of Asana, Pranayama, Kriya, Mudra, and Bandha were selected from the 62 articles that were first found. Additionally, B.K.S. Iyengar's Light on Yoga was used to extract traditional yoga techniques related to metabolic diseases. The Morarji Desai National Institute of Yoga's (MDNIY) suggested institutional principles and standardized protocols served as the framework for this study. The initial list was further improved by knowledgeable recommendations from the research supervisor and seasoned yoga practitioners.

Phase II: Sorting and Categorization Yogic Practices for Module

1. **Asana** (standing, sitting, prone, and supine postures)
2. **Pranayama** (breathing techniques),
3. **Kriya** (internal cleaning procedures),
4. **Mudra** (hand gestures), and
5. **Bandha** (energy locks)

were the **five main categories** into which the shortlisted practices were methodically divided. Practices that support abdominal compression, pancreatic stimulation, endocrine balance, metabolic enhancement, and stress reduction were highlighted in the last module. The IYM featured specific **Asanas, Pranayamas, Kriyas** for cleaning techniques, **Mudras** for therapeutic purposes, and **Uddiyana Bandha**.
These were reviewed to understand the yoga practices that would lessen directly or indirectly the clinical features of diabetes. The review showed that **58 Asanas, 7 Pranayamas, 4 Kriyas, 5 Mudras and 1 Bandha** are useful directly or indirectly to address different clinical features of diabetes. Yogic counseling was also included by taking references from yoga texts such as the Bhagavad-Geeta, Patanjali Yoga Sutra and Yogavacista.

Phase III: Expert Consensus for Content Validation

The department's ethical committee given its approval to the research protocol. The yoga experts who validated this module provided their informed consent. Twenty (20) yoga specialists or experts with more than five years of expertise in yoga therapy or instruction made up the expert panel that validated the content. Experts were given access to the module, and they assessed each technique according to its applicability and safety for managing diabetes. The verified Integrated Yoga Module was finalized by compiling, analyzing, and incorporating expert feedback.
"Content validity of the Integrated Yoga Module was established using **Lawshe's Content Validity Ratio (CVR)**. Twenty (20) yoga experts with more than five years of experience evaluated each practice for its relevance and safety in diabetes management. Items with CVR values ≥ 0.42 were retained. All selected yoga practices demonstrated acceptable CVR values, confirming strong expert agreement and content validity of the module."
The formula for calculating the Content Validity Ratio (CVR) is as follows:
(i). CVR Formula (Lawshe, 1975)

The **Content Validity Ratio (CVR)** is calculated using the following formula:

$$CVR = \frac{n_e - \frac{N}{2}}{\frac{N}{2}}$$

Where:
Ne = Number of experts who rated the item as **"Essential".**
N = Total number of experts on the validation panel
(ii). Application to the Present Study
Total experts (N) = 20 Yoga Experts
Each yoga practice (Asana, Pranayama, Kriya, Mudra, Bandha) was evaluated for **relevance, safety, and applicability** for diabetes management
Experts classified each item as:
1. **Essential**
2. **Useful but not essential**
3. **Not necessary**

Note: Only **"Essential"** responses are used for CVR calculation
(iii). Examples CVR Calculation
Example 1: Asana – Ardha Matsyendrasana
Number of experts rating it as Essential (Ne) = 15
Total experts (N) = 20
CVR Calculate:
CVR= ((15−(20/2))/(20/2)= (15-10)/10= **0.50**
A CVR of **0.50** indicates **strong content validity**, exceeding the minimum acceptable value.
Example 2: Pranayama – Anuloma Viloma/Nadi Sodhana
Experts rating as Essential (Ne) = 17
Total experts = 20
CVR= ((17−20/2))/(20/2)= (17-10)/10= 7/10= **0.70**
(iv). Minimum Acceptable CVR Value
According to **Lawshe's CVR critical values**:
For **20 experts**, the **minimum acceptable CVR = 0.42**

CVR Value	Decision
≥ 0.42	Retain/confirmed items
< 0.42	Revise or delete the items

All practices in the Integrated Yoga Module showed **CVR values above 0.42**, confirming strong expert consensus. The item that meets the required CVR threshold is placed in the module.

4.0. Result and Discussion:

DEVELOPMENT OF AN INTEGRATED YOGA MODULE FOR DIABETES

Table 2. Asana Practices and CVR Ratio Included in the Integrated Yoga Module (IYM) for Diabetes

S. No.	*Name of Asana*	*CVR*	*Category (Posture Type)*	*Therapeutic Rationale in Diabetes*
1	Surya Namaskar	**0.8**	Dynamic / Warm-up	Enhances metabolic rate, improves insulin sensitivity
2	Ardha Chakrasana	**0.5**	Standing	Pancreatic stimulation, glucose regulation
3	Kati Chakrasana	**0.5**	Standing	Enhances insulin production and improves glucose utilization
4	Trikonasana	**0.5**	Standing	Stimulates liver and abdominal organs
5	Vajrasana	**0.6**	Sitting	Activates digestive and pelvic organs
6	Mandukasana	**0.6**	Sitting	Associated with pancreatic massage

7	Paschimottanasana	**0.7**	Sitting	Activates digestive and pelvic organs
8	Ardha Matsyendrasana	**0.5**	Sitting (Twist)	Pancreatic stimulation, glucose regulation
9	Uttanapadasana	**0.5**	Supine	Improve insulin sensitivity and tone abdominal organs
10	Viparita Karani	**0.5**	Supine	Improve Blood to pancreas, reducing stress and sugar spikes.
11	Pavanmuktasana	**0.5**	Supine	Compresses lower abdomen, relieves gas
12	Sarvangasana	**0.5**	Supine	Harmonizes endocrine system
13	Halasana	**0.5**	Supine	Increases intra-abdominal pressure
14	Bhujangasana	**0.7**	Prone	Improves posture, circulation, and neuromuscular balance
15	Dhanurasana	**0.7**	Prone	Directly stimulate beta-cells in pancreas
16	Savasana	**0.5**	Relaxation	Reduces cortisol and stress-induced hyperglycemia

The Integrated Yoga Module's (IYM) asana component is specifically created to treat the neurophysiological, pancreas, endocrine, and metabolic dysfunctions linked to diabetes. The chosen poses primarily focus on inversion, front bending, back bending, spine twisting, and abdominal compression, all of which have been scientifically and traditionally associated with increased insulin sensitivity and pancreatic activation. As a metabolic warm-up, dynamic exercises like Surya Namaskar improve insulin reactivity and skeletal muscle uptake of glucose. Postural alignment, circulation, and visceral organ stimulation, especially of the liver, which is crucial for glucose homeostasis, are all enhanced by standing poses like Ardha Chakrasana, Kati chakrasana and Trikonasana. By applying mechanical pressure to the abdomen region, seated twisting poses (Ardha Matsyendrasana) and forward compressive poses (Mandukasana, Paschimottanasana) increase pancreatic perfusion and enzymatic activity. Bhujangasana and Dhanurasana are prone poses that raise intra-abdominal pressure and encourage the massage of endocrine glands, such as the pancreas and adrenal glands. Sarvangasana and other inversions help maintain hormonal balance by influencing the hypothalamic-pituitary-endocrine axis. Savasana is essential for lowering cortisol levels, which helps to lessen hyperglycemia brought on by stress. When combined, these poses offer a comprehensive physiological stimulus that helps control blood sugar levels **(Innes KE, Selfe TK., 2016).**

Table 2. Pranayama Practices and CVR Ratio Included in the Integrated Yoga Module for Diabetes

S. No.	***Name of Pranayama***	***CVR***	***Type***	***Physiological Significance in Diabetes***
1	Anuloma Viloma / Nadi Sodhana	**0.7**	Alternate nostril breathing	Improves autonomic balance, reduces stress
2	Bhastrika	**0.7**	Bellows breath	Mind-body energizer
3	Bhramari	**0.5**	Humming breath	Reduces mental stress and hypertension
4	Surya Bhedana	**0.5**	Right nostril breath	Cures asthma, cough, and boost pranic energy

The IYM's pranayama techniques were chosen because they have been shown to improve metabolic homeostasis, stress reduction, and autonomic nervous system regulation, all of which are crucial for managing diabetes. By balancing sympathetic and vagal activity, Anulom Vilom (Nadi Shodhana) encourages parasympathetic dominance, which improves heart rate variability and lessens stress-induced glucose swings. This autonomic balance is essential for controlling inflammatory pathways and insulin resistance, which are frequently increased in diabetes. By stimulating the vagus nerve with extended exhale and humming vibrations, Bhramari pranayama produces a relaxing neurophysiological effect. This results in greater emotional regulation, decreased blood pressure, and decreased cortisol secretion, all of which are

closely associated with improved glycemic management. Bhastrika and Surya bhedan are crucial for flow energy in body-mind and boost pranic energy. They are particularly helpful for people who have anxiety, heat intolerance, or stress-related hyperglycemia. By addressing the psychoneuroendocrine aspect of diabetes, these breathing techniques work in tandem to enhance the physical practices and strengthen the integrative nature of the IYM. Their incorporation improves the module's capacity to control diabetes via emotional and stress-related pathways in addition to the physiological level **(Sarang PS, Telles S., 2006).**

Table 3. Kriya Practices and CVR Ratio Included in the Integrated Yoga Module for Diabetes

S. No.	*Name of Kriya*	*CVR*	*Nature of Practice*	*Therapeutic Role in Diabetes*
1	Agnisar	**0.9**	Abdominal activation	Enhances digestion and metabolic efficiency
2	Kapal Bhati	**0.8**	Cleansing (Forceful exhalation)	Tones pancreas, improves insulin function
3	Nauli	**0.5**	Abdomen wave like motion	Give the massage to digestive organs

The IYM's kriya component targets basic dysfunctions in diabetes, including poor digestion, insulin resistance, and slow metabolism, by concentrating on abdominal cleaning and metabolic activation. With its strong exhalations, Kapal Bhati strengthens the muscles in the abdomen and stimulates the visceral organs, especially the liver and pancreas. Rapid diaphragmatic motions promote blood flow to endocrine glands, raise intra-abdominal pressure, and improve insulin sensitivity and secretion. Through repetitive contractions and relaxations of the abdomen, agnisar kriya improves gastrointestinal motility, increases metabolic efficiency, and greatly stimulates the digestive fire (agni). By improving nutrition absorption and stimulating the enteric nerve system, this practice indirectly promotes stable blood glucose levels. Since obesity and metabolic issues are intimately linked to Type 2 Diabetes, both kriyas are typically advised for these conditions. Nauli is wave like motion performed by the abdominal muscles and helps to massage the digestive organs, i.e., liver, stomach, pancreas, gall bladder, spleen, intestines, by the churning abdominal muscles. From a therapeutic standpoint, kriyas improve organ responsiveness and purify the body, laying the groundwork for asana and pranayama. By addressing diabetes at the digestive–metabolic axis, their inclusion reinforces holistic disease management and increases the module's potential for prevention and treatment **(Sinha S et al. 2004).**

Table 4. Mudra and Bandha Practices Included in the Integrated Yoga Module for Diabetes

S. No.	*Practice*	*CVR*	*Category*	*Functional Significance in Diabetes*
1	Apana Mudra	**0.5**	Mudra	Supports detoxification and insulin secretion
2	Prana Mudra	**0.7**	Mudra	Enhances vitality and glucose utilization
3	Surya Mudra	**0.8**	Mudra	Boosts metabolism, supports weight control
4	Uddiyana Bandha	**0.7**	Bandha	Deep abdominal massage, pancreatic activation

The IYM's bandha and mudra exercises offer delicate yet potent neuromuscular and energetic control that enhances the physical exercises. Prana Mudra is thought to improve cellular energy use and vitality, promoting glucose uptake and lessening the weariness that diabetics frequently suffer. Surya Mudra is linked to enhanced lipid metabolism, weight control, and metabolic fire activation—all important aspects of managing insulin resistance. Apana Mudra aids in detoxifying and has long been associated with renal and pancreatic health, all of which are important for the treatment of diabetes. By producing a deep abdominal vacuum and efficiently massaging the pancreas, liver, and intestines, Uddiyana Bandha plays a crucial therapeutic role. This upward raise of the abdominal organs improves digestive efficiency, increases circulation, and stimulates endocrine secretions. Additionally, the bandha enhances autonomic balance and fortifies core muscles, which indirectly affects glucose control. The addition of mudra and bandha extends the module beyond physical exercise into self-regulatory practices that are easily maintained over time,

reflecting the integrated and subtle therapeutic philosophy of yoga. They are perfect adjuncts in the therapy of diabetes because of their efficacy, safety, and ease of use **(Telles S, Singh N. 2013).**

TABLE 5. INTEGRATED YOGA MODULE FOR DIABETES

Five Days in a Week **Time: 60-90 Min**

S.No.	Name of Practices	Category (Posture Type)	Repetitions, Time, Breath (For Beginning)	Repetitions, Time, Breath (For Intermediate)	Repetitions, Time, Breath (For Advance)
1	Surya Namaskar	Dynamic / Warm-up	2-4 rounds	4-8 rounds	8x12 rounds
2	Ardha Chakrasana	Standing	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
3	Kati Chakrasana	Standing	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
4	Trikonasana	Standing	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
5	Vajrasana	Sitting	1-3 minutes	3-5 minutes	5-10 minutes
6	Mandukasana	Sitting	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
7	Paschimottanasana	Sitting	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
8	Ardha Matsyendrasana	Sitting (Twist)	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
9	Uttanapadasana	Supine	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
10	Viparita Karani	Supine	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
11	Pavanmuktasana	Supine	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
12	Sarvangasana	Supine	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
13	Halasana	Supine	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
14	Bhujangasana	Prone	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
15	Dhanurasana	Prone	R1x20sec, R2x30sec	R1x30sec, R2x45sec	R1x45sec, R2x60sec
16	Anuloma Viloma / Nadi Sodhana	Alternate nostril breathing	8-10 rounds Ratio: 1:1 (no hold)	10-15 rounds Ratio: 1:2 (no hold)	15-20 rounds Ratio: 1:4:2 (withhold)
17	Bhastrika	Bellows breath	10-15 Bellows breath x 2-3 rounds	15-30 stroke Bellows breath x 3-5 rounds	30-40 Bellows breath x 5-8 rounds
18	Bhramari	Humming breath	3-4 rounds	6-8 rounds	10-12 rounds
19	Surya Bhedana	Right nostril breath	3-4 rounds	6-8 rounds	10-12 rounds
20	Agnisar	Abdominal activation	3-4 rounds	6-8 rounds	10-12 rounds
21	Kapal Bhati	Cleansing (Forceful exhalation)	3-4 rounds	6-8 rounds	10-12 rounds

22	Nauli	Abdomen wave-like motion	3-4 rounds	6-8 rounds	10-12 rounds
23	Apana Mudra	Mudra	2-5 minutes	5-10 minutes	10-15 minutes
24	Prana Mudra	Mudra	2-5 minutes	5-10 minutes	10-15 minutes
25	Surya Mudra	Mudra	2-5 minutes	5-10 minutes	10-15 minutes
26	Uddiyana Bandha	Bandha	3-4 rounds	6-8 rounds	10-12 rounds
27	Savasana	Relaxation	2-5 minutes	6-8 minutes	10-12 minutes

5.0. Conclusion:

Using a systematic content validity strategy based on current scientific knowledge, expert consensus, and classical literature, the current study effectively created and validated an Integrated Yoga Module (IYM) for Diabetes. The module's scientific validity, therapeutic relevance, safety, and practicality for people with diabetes were all guaranteed by the methodical, multi-phase approach. In order to address important pathophysiological elements of diabetes, including as poor glucose metabolism, pancreatic dysfunction, endocrine imbalance, obesity, and stress-induced hyperglycemia, the IYM incorporates carefully chosen Asana, Pranayama, Kriya, Mudra, and Bandha practices. The focus on stress reduction, autonomic modulation, spinal twisting, and abdominal compression reflects both contemporary biomedical knowledge and old yogic wisdom. The module's content authenticity was confirmed by an expert panel of twenty seasoned yoga practitioners who showed a high degree of agreement regarding the safety and applicability of all included practices. The IYM's reliability is bolstered by the consensus-based validation, which also supports its application as a standardized, non-pharmacological diabetes treatment supplement. All things considered, the validated IYM offers a methodical, comprehensive, and repeatable yoga intervention that can be successfully integrated into diabetes treatment and prevention. Additionally, the module provides a solid basis for upcoming clinical trials to assess its effectiveness on metabolic parameters, insulin sensitivity, glycemic management, and quality of life in people with diabetes.

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