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Protocol

A study protocol to develop and assess the utility of a Dinacharya habit-tracking mHealth app towards modification of health behaviour of study subjects

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ABSTRACT

Background: Dinacharya (daily regimen) in Ayurveda are health practices that sync with circadian rhythms, and promote holistic health. Mobile health apps (mHealth) are widely adopted tools of behavioural change communication to implement health behaviours. However, there is still significant scope for mHealth research in Ayurveda. In particular, there is a noticeable lack of high-quality, authentic, educational and interactive habit-tracking apps based on Dinacharya principles. The objective of this study is to develop and assess the utility of Dinacharya Habit-Tracking mHealth App on the health behavior of subjects.
Methods: The study has 3 parts: design and validate Dinacharya guidelines and Dinacharya KAP questionnaire (Delphi method); develop a habit-tracking Dinacharya app and multimedia database, and assess the app's effectiveness on health behaviour outcomes of the study subjects with a prospective randomized controlled trial. 72 healthy volunteers, aged between 18 to 65 years, English speaking and mobile literate will be recruited. Participants will be randomized into the trial group receiving the app intervention (n=36) and the control group receiving Dinacharya printed material intervention (n=36), for 4 weeks. Primary outcomes include frequency of habit adoption, and knowledge, attitudes and practice of Dinacharya. Secondary outcomes include objective and subjective assessment of feasibility, usability, navigation, motivation, and overall rating via the Mobile app rating scale (MARS) and semi-structured interviews, respectively. The outcomes will be assessed at baseline, week 1, week 2, week 3, and post-intervention.
Conclusions: The findings from this study will offer empirical data on the effectiveness of mHealth in promoting healthy habits, and educating users about Dinacharya. Findings may guide development of future Ayurveda-based apps by demonstrating how digital tools can support user engagement and integrate traditional wellness principles into modern healthcare.
Trial Registration: CTRI-Clinical Trial Registry of India (CTRI/2025/06/089328).

Keywords: mHealth, Ayurveda, Dinacharya, Daily regimen, Health app

INTRODUCTION

Public health, especially community wellbeing and preventing illness is progressing towards evidence-based measures whose efficacy and value have been well analyzed.[1] Health behavior is closely linked to health motivation. Among holistic and traditional systems of medicine, one of the systems to strongly encourage preventive medicine and lifestyle medicine is Ayurveda – one of the most ancient healing systems to flourish in the Indian subcontinent. Principles of Preventive Ayurveda called Swasthya Rakshan like Dinacharya (the daily

regimen) advocate the importance of such health behavior for positive wellbeing. Health behavior is learned and sustained behavior reflecting what Ayurvedic classical texts describe as Abhyasa – continuous and intentional practice (of a health behavior). Also called Shilana (habit) and Satata Kriya (continuous action).[2] It is said to be the key to the success of Dinacharya and other Swasthavritta (preventive medicine) practices. However, in order to bring positive change in health behaviors with measures like Dinacharya and other lifestyle modifications, sufficient motivation is required along with accurate and trustworthy health education. People seek authenticity of information, proper guidance and ease of practice. In the tech-driven world today, healthcare systems across countries are proactively engaged in health informatics to provide better, more efficient services.

Previous modes of health education as well as contemporary techniques of health promotion illustrate that interventions should focus on changeable behaviors and objectives.[3,4] The KAP model contends that knowledge constructively impacts a person's attitude and attitude consecutively impacts practices and behaviors. The United Nations in their mHealth for Development[5] report had presented the Opportunity of Mobile Technology for Healthcare, stating that every day, increasing evidence supports the substantial potential for mobile health and mass communication to greatly impact the health care sector.

The National Health Portal of India encourages and even offers mHealth apps on its online portal like "no more tension de-stress" app, and "My Hospital" app. Under the ICT initiatives of the Ministry of Health and Family Welfare, there are launched several health apps like NHP Swastha Bhaarat (health info education on diseases, lifestyle, and first aid) launched in April of 2016.[6] The Ministry of AYUSH (MoA) too, in the endeavors of AYUSH informatics, encourages, supports and offers products related to mobile health apps like Ayush Sanjivani and Y Break (yoga break). Central sector schemes like AYURGYAN scheme support education, research and innovation including AYUSH intervention in public health care for Disease prevention and health promotion.[7] In 2019, corresponding to the endeavors of 'Digital India', the Ministry of AYUSH projected a milestone venture called the AYUSH Grid, aiming to integrate IT solutions in all areas of AYUSH.[8] The recent (2022) AYUSH start-up challenge in collaboration with All India Institute of Ayurveda (AIIA) invited a category called AYUSH IT solutions in the areas of artificial intelligence (AI) based innovations in Ayurvedic diagnosis, VR, bio sensors and tracking devices, stating that new creations in the IT arena have the ability, beyond any other option, to encourage many stake holders in the sphere of AYUSH.[9]

A study by Central Council for Research in Ayurvedic Sciences (CCRAS), showed that out of 723,459 subjects, a whopping 85.2% were found to be using forms of AYUSH methods to prevent disease and maintain wellbeing during the COVID 19 pandemic in India.[10] In 2017, India tabled a resolution at WHO for mHealth (suitable digital-based innovations for public wellbeing) at the seventy-first World Health Assembly.[11] WHO's global strategy of digital health 2020 to 2025 targets promoting wellbeing for all, globally, by enhancing creation and implementation of people-centric digital-based wellbeing solutions to promote health and well-being. Current estimates show that greater than 259,000 mHealth digital apps appear now in application stores resulting in an estimated 3.2 billion downloads each year.[12] According to WHO, non-communicable or lifestyle disorders (NCDs) are responsible for about forty-one million annual deaths, which makes up almost 71 percent of worldwide mortalities.[13] Swasthavritta measures like Dinacharya, Ritucharya (lifestyle measures), help to prevent non-communicable diseases.[14] Digital health may therefore prove valuable in changing positive health behaviour to prevent such diseases and motivate people to maintain health. According to WHO Global Report on Traditional and Complementary Medicine 2019, 88% (170 member states) acknowledge traditional and complementary medicine in use and regulated by law in their countries.[15]

In the areas where conventional bio-medicine falls inadequate, populations look towards holistic, traditional medicine for health solutions. However, far and few seek Ayurveda, preventive medicine or traditional medicine as their primary healthcare option. In a world where information is power – creating awareness, updating traditional knowledge to the changing world today, and exploring Ayurveda through the lens of evidence-based methods is indubitably essential.

This proposed study represents a modest yet significant advancement toward the challenging and essential goal of promoting health education and awareness through Ayurveda, beginning with the foundational chronobiology-based concept of Dinacharya (the daily regimen) as a model for holistic well-being.[16]

Study rationale

Smartphone mobile apps are effective mediums that may be utilized for health tracking, self-analysis and wellness management. Studies show that people who track their self-health and wellbeing using mobile phones, tend towards better health outcomes than others.[17] Research has not wholly ascertained how Ayurveda based tracking apps can be effective as health education tools. The current study is based on solving this research gap. Hence, this research has been designed to study Dinacharya practices relevant to the modern era, interpret methods to implement them practically in standardized ways for apparently healthy individuals and build a platform that could promote health education and behavioural change through interactive self-tracking, instructional videos, a unique multimedia database, authentic information bank, and ease of access via a digital app. It is designed to become a

potential option in the behaviour change toolkit of preventive Ayurveda.

As of the time this protocol was prepared, there is no research available to suggest online app megastores have any exclusive Dinacharya app that possesses a habit tracking feature and depth of health education that this study plans to have. Moreover, the lax regulation on disseminating Ayurvedic information, prescriptions and therapies via apps, blogs and unofficial websites with respect to authentic classical Ayurveda references, in relation to preventive healthcare, is often ambiguously presented and many times is not sufficiently backed with robust literary research. The course of this study may also assist in identifying possible challenges in digitization of such data, and help in the formulation of strategies for future development of Ayurveda-based mobile apps.

A survey of available apps related to Ayurveda available in online stores in the arena of mhealth and preventive Ayurveda was conducted as part of the preliminary research leading up to this study design. Ayurveda based apps available on common app stores are specific to a niche area like plants or a Dravyaguna database (Ayurvedic pharmacopoeia), medicine database, home remedies, disease wise treatments, recipes, Prakriti analysis, pulse analysis (e.g. AyurPro), shloka (verses from the classical Ayurvedic text) learning apps, and of course, diagnosis, consultations and patient EHR. The study revealed several significant shortcomings that undermine their overall effectiveness and user engagement of the few apps that touched upon daily regimen. Most were static in nature and lacked interactivity, offering only basic information, without features that promote meaningful user involvement. Furthermore, these applications frequently do not provide references or credible sources for the information presented, which raises concerns regarding the authenticity and reliability of the guidance offered. Moreover, the absence of habit-tracking or self-monitoring features represents a missed opportunity to support users in building and maintaining healthy routines over time.

Amongst the many fields of Ayurveda, Swasthavritta deals with preventive care and public health on personal and community levels. At a community level, health education still stands as the most crucial form of disseminating accurate and authentic health information and training the public to follow the same. It is the need of the hour. Ayurveda must take the jump from the classical ancient texts to the arena of modern information technology to reach a wider target audience, engage the tech-savvy community and benefit people on a large scale.

This study will test the following hypothesis: individuals who have received the Dinacharya mHealth habit-tracking app intervention will have significantly better health behaviour outcomes and increased user engagement compared with those who have received the Dinacharya printed IEC material only.

Research question

Whether the Dinacharya mHealth habit-tracking app is more effective on health behaviour of healthy volunteers than Dinacharya printed IEC material?

Hypotheses

Null hypothesis (H_0)

Dinacharya mHealth habit-tracking app is not more effective on health behaviour of healthy volunteers than Dinacharya printed IEC material.

Alternative hypothesis (H_1)

Dinacharya mHealth habit-tracking app is more effective on health behaviour of healthy volunteers than Dinacharya printed IEC material.

Aims

Stage 1 was to standardize Dinacharya guidelines, to validate Dinacharya KAP questionnaire and to develop a digital multimedia database.

Stage 2 was to develop the Dinacharya habit-tracking mHealth app for use in the present era.

Stage 3 was to assess effectiveness of Dinacharya habit-tracking mHealth app compared with printed Dinacharya IEC material on health behaviour of healthy volunteers.

Objectives

Stage 1

Stage 1: to study and critically analyze the concepts of Swasthavritta principles of Dinacharya and standardized guidelines and modifications of Dinacharya practice relevant to present era, for apparently healthy individuals; to validate Dinacharya KAP questionnaire as an assessment tool; and to develop a digital multimedia database of IEC material including instructional practice videos, instructional audios, info graphics, photographs, and text media, based on data collected in stage 1.

Stage 2

Stage 2: to develop the Dinacharya habit-tracking mHealth app.

Stage 3

Stage 3: to assess effectiveness of Dinacharya habit-tracking mHealth app compared with Dinacharya printed IEC material on health behaviour of healthy volunteers via a randomized controlled trial.

METHODS

This protocol was designed in accordance with the standard protocol items: recommendations for interventional trials (SPIRIT) guidelines. Stage of study - stage 1: validation of Dinacharya KAP questionnaire, standardization and compilation of Dinacharya guidelines for healthy population, via a Delphi survey, digital database development; stage 2: design and development of the app; and stage 3: a randomized controlled trial to compare the effectiveness of a 4-week intervention of interactive Dinacharya habit-tracking digital mHealth app, on health behaviour outcomes of healthy volunteers.

Materials

For the literary study, the data collection tools will include Ayurvedic classical texts, published works by bodies of the government of India (AYUSH sector), online databases including MEDLINE/PuBMeD, PuBMeD Central, Elsevier, EMBASE, ResearchGate and Google Scholar, conference proceedings, expert inputs. The literary study will be conducted by compiling data from the authentic classical Ayurveda texts and academic research literature sources. These references will be compiled, critically examined and utilized to frame the conceptual part of the study. For the interventional study: enrolment form, dinacharya knowledge, attitudes and practice questionnaire, weekly mobile app tracking report (only trial group), weekly Dinacharya practice report (only control group), semi-structured subject interviews, MARS – mobile app rating system, weekly mobile app tracking report, and the weekly Dinacharya practice report will be used for the data collection and final assessments.[18]

Study design

A randomized controlled interventional trial of Dinacharya habit-tracking digital mHealth app on health behaviour outcome, with assessments at baseline, 1st, 2nd, 3rd week, post intervention at 4th week. Randomization: will be done using a computer program. Subjects will be randomly selected and further randomly allocated into trial group (n=36) and control group (n=36). The study flow diagram including CONSORT flowchart is represented in Figure 1.

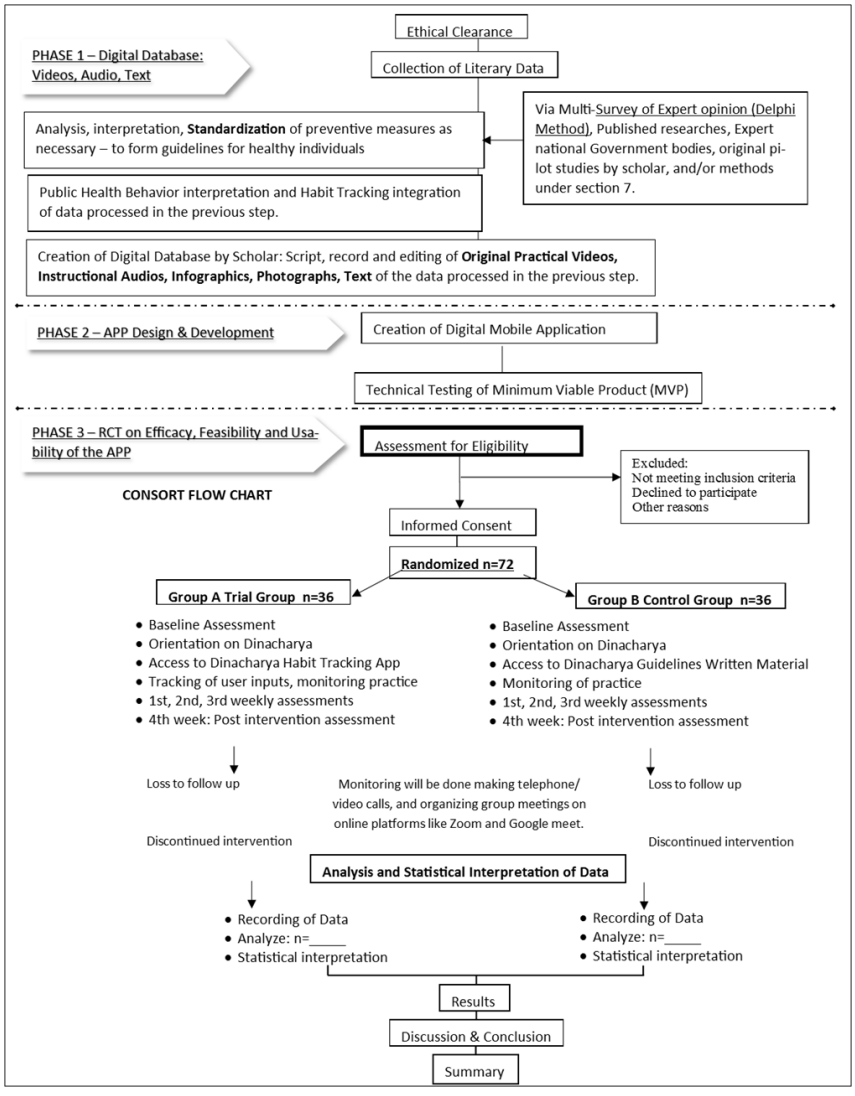

Figure 1: The study flow diagram including the CONSORT flowchart.

Inclusion criteria

Apparently, healthy individuals of either gender; aged 18 to 65 years; willing to download the app or receive the printed IEC material; who are English literate and mobile literate.

Exclusion criteria

Subjects currently using the any habit-tracking/fitness tracking app, subjects having night shift timings of work, subjects with unpredictable travel lifestyle, subjects with alcohol, tobacco addictions/drug abusers, pregnant/ lactating mothers, subjects with known case of major systemic illness and/or acute/chronic diseases, necessitating treatment, will be excluded.

Withdrawal criteria

Subjects who wish to leave the study voluntarily for any reason and subjects who do not provide any inputs at two consecutive weekly assessments.

Place of study

Online mode – semi-urban/urban cities of Western India viz. Maharashtra, Goa, Gujarat and at the Mahatma Gandhi Ayurved College, Hospital and Research Centre, Datta Meghe Institute of Higher Education and Research, Wardha, Maharashtra, India.

Recruitment and enrolment

The principal investigator will connect with potential participants via email and/or phone and explain the study details, ascertain eligibility and conduct the trail. Healthy volunteers who express interest in participating will be screened for eligibility by the principal investigator. Participants will be informed about the study and their informed consent will be taken prior to their enrolment in the study. The written informed consent will be obtained after the investigator has verbally explained the protocol and addressed any questions from potential participants. Only those who provide signed informed consent will be enrolled in the study.

Sample size

Sample size calculation was done with reference to a similar method of a previously published study where calculating sample size needed to compare 2 proportions: 2-sample, 2-sided equality. For a two-sample test to determine whether the proportion in group A, pApA, is different from the proportion in group B, pBpB. The hypotheses are: H0: pA−pB=0 and H1: pA−pB≠0, where the ratio between the sample sizes of the two groups is κ=nA/nB which is 1 (equal groups).

The formulae to compute sample size and power is represented in Figure 2.

$$n_A = \kappa n_B \text{ and } n_B = \left(\frac{p_A(1-p_A)}{\kappa} + p_B(1-p_B)\right)\left(\frac{z_{1-\alpha/2} + z_{1-\beta}}{p_A - p_B}\right)^2$$

$$1-\beta = \Phi\left(z - z_{1-\alpha/2}\right) + \Phi\left(-z - z_{1-\alpha/2}\right) \quad , \quad z = \frac{p_A - p_B}{\sqrt{\frac{p_A(1-p_A)}{n_A} + \frac{p_B(1-p_B)}{n_B}}}$$

Figure 2: Formulae to compute sample size and power.

Where, κ=nA/nBκ=nA/nB is the matching ratio which is 1, ΦΦ is the standard normal distribution function, Φ−1Φ−1 is the standard normal quantile function, α is type I error which is 5% or 0.05, β is type II error (0.20), meaning 1−β1−β is power which is 0.80, pA is group A proportion=0.85, pB=group A proportion 0.55, and assuming difference between two groups is 30%. Considering dropouts at 10%: 33+3=36. The total sample size of both groups is 72.

Sampling procedure

Random sampling method was used.

Grouping

Group-A trial group and group-B control group of sample size n=36 each is proposed. The trial group will receive the Dinacharya habit tracking mHealth app guided Dinacharya practice for 4 weeks with assessments at baseline, 1st, 2nd, 3rd and 4th week; while the control group will receive the printed Dinacharya IEC material guided Dinacharya practice for the same duration and assessment intervals.

Randomisation and random allocation

Once eligibility is confirmed and written informed consent is obtained, participants will then be randomly allocated to one of two groups using computer-generated random numbers.

Intervention

Participants will be asked to attend an orientation session and follow the instructions given in the Dinacharya habit tracking app (trial group) or the printed Dinacharya IEC material (control group), every day for the duration of the study (4 weeks). The following practices of Dinacharya will be included in the study: Bramha Muhurta Utthana (waking up early), Sharir chintana (self-analysis, mindfulness), Danta Dhavana, Manjana (oral hygiene practices), Jivha Nirlekhana (cleaning of the tongue), Ushapana (drinking warm water in the morning, mindfully), Kavala (oil pulling), Pratimarsha Nasya (nasal oil application), Vyayama (exercise), Abhyanga (oil massage), Udvartana (body scrub), Hita Mita Bhojana/Ahara and Kalabhojana (timely and clean eating), Ratricharya (night regimen), Nidra (sleep hygiene

practices at night), and any other relevant aspects of Dinacharya.

Participant's compliance, motivation and adherence to intervention

Participants will have daily self-tracking and weekly reports and will receive daily check-ins and motivational notifications from the investigator. Participants will have a provision for one-on-one sharing of experiences, challenges, doubts and any required assistance from the investigator.

Participants' data will be monitored by the investigator through the app (trial group) and through the daily check-ins for the control group. Weekly follow ups and open conversations will be conducted by email, text message or telephone call during the intervention period every week.

Primary outcomes

Modification of health behavior in terms of increased frequency and motivation of Dinacharya practices, as well as knowledge, attitudes and practice of Dinacharya are the primary outcomes.

Secondary outcomes

App utility, feasibility, user engagement, navigation, level of interaction, subjective feedback and motivation will be the secondary outcomes.

Assessment criteria

Dinacharya KAP questionnaire**,** weekly mobile app tracking report, weekly Dinacharya practice report, MARS, and semi-structured interview.

Safety management

While lifestyle interventions are usually considered safe, there is a possibility that participants may encounter unexpected issues such as reactions to oil massage, minor irritation due to nasal oil application, fatigue due to early waking, or other discomforts. To address this, participants will be closely monitored for any adverse effects or complications. Should any unwanted effects arise, the intervention may be discontinued, and the reasons will be reviewed by the investigator. For minor events, medical aid will be provided, and for serious events, if any, participants will be instructed to seek immediate medical attention.

Data storage and management

Data storage will be done at the Department of Swasthavritta, Mahatma Gandhi Ayurved College, Hospital and Research Centre, Datta Meghe Institute of Higher Education and Research, Wardha, Maharashtra, India, and the principal investigator will be responsible. Participant confidentiality will be ensured and no identity or personal information will be reported in any publication and/or presentation.

Data analysis plan

All the data collected will be recorded in Microsoft excel version 2019 or higher and any other means of storage. Data will be analyzed in statistical software statistical package for the social sciences (SPSS) version 22 or higher. Mean, standard deviation, t-test, ANOVA and/or any other appropriate statistical test will be used for the purpose of statistical analysis. The data so collected will be analyzed using standard statistical tools under advisement by the bio-statistician to draw inferences and obtain results. Frequency and percentages will be used to sum up category-based variables like gender, marital status, occupation, and education. Effect on health behavior will be calculated based on assessment criteria. Level of significance will be taken at 95%. P value of <0.05 will be considered for significant results.

DISCUSSION

Based on the descriptive study, the developed app and the study data, the observations and results will be recorded in text form, graphical form and tabulated form in order to conduct appropriate discussion.

The present study aims to leverage digital technology to enhance adherence to Dinacharya, the traditional Ayurvedic daily regimen, and to evaluate its impact on health behaviour, knowledge, attitudes, and practice (KAP) among users. The integration of mobile health (mHealth) applications into Ayurvedic lifestyle recommendations is a novel approach that addresses a gap in the digital advancement of traditional sciences, particularly in public and community health contexts.[19] As of latest research including megastores like Google Play, iOS app store, Windows Play app store etc. there is no evidence of any Ayurvedic Dinacharya app that possesses a habit tracking feature.

Prior research on Dinacharya has primarily focused on its conceptual framework and benefits for maintaining circadian rhythm, holistic health, and disease prevention.[20,21] Very few have attempted to explore prospective empirical studies on Dinacharya practices, and none have explored the effect of Dinacharya practices as a sequential and complete intervention using mHealth.[22] Jadhav conducted a retrospective study on Dinacharya, albeit without digital intervention.[22] Some have studied the effects of single practices from the sequence of Dinacharya like Pardeshi and Kumar on Danta Dhavana (oral self-care rituals).[23,24]

These studies have largely relied on self-reported adherence, educational interventions, and qualitative feedback rather than real-time digital tracking and personalized reminders. The present study introduces a

systematic, technology-driven approach, using a mobile app to track daily practices, which may increase both the frequency and motivation of Dinacharya adherence compared to traditional methods.

Another unique approach in this study is the creation of SOPs (standard operating procedures) for the daily regimen practices described in Dinacharya for apparently healthy individuals in a DIY self-care format. A Delphi survey will be used to formulate, refine and validate the SOPs using a systematic feedback strategy, involving a panel of over 30 experts in the subject of Swasthavritta (preventive medicine in Ayurveda), in multiple rounds.[25] Presently, such a systematic endeavour to standardize self-practice of Dinacharya for healthy people is not recorded or available in published literature.

Subjective experiences and feedback form an important aspect if health behaviour implementation. Attitudes, values, beliefs, cultural inhibitions, practical difficulties, convenience and awareness largely impact the actual implementation of holistic lifestyle behaviours. Particularly with Ayurvedic practices that may be novel to the general lifestyles of urban individuals, assessing their subjective opinions and experiences is another parameter this present study will attempt to evaluate. This subjective approach to Dinacharya as a whole is not identified in previous studies either. Previous digital health studies in Ayurveda have reported positive user experiences and easy navigation, but detailed assessments of interaction levels and subjective feedback are rare.[26] The current protocol will include semi-structured interviews and weekly tracking reports to capture nuanced user experiences, thereby addressing a key limitation in prior research.

Earlier studies have documented improvements in health outcomes and well-being among individuals who follow Dinacharya, but there is limited evidence on how digital tools influence KAP.[22] The current study will include the designing, validation and pilot testing for reliability of the Dinacharya KAP questionnaire to assess changes in knowledge, attitudes, and practice, providing a more robust and measurable outcome than previous descriptive or observational studies.

Existing Ayurveda-related mobile apps have demonstrated the potential for personalized health recommendations, symptom tracking, and user engagement.[27-29] However, most apps focus on general Ayurvedic principles or specific remedies rather than daily regimen tracking. The present study will specifically assess the utility, feasibility, and engagement of a Dinacharya-focused app, using established tools such as the MARS and user feedback.[18] This approach is expected to yield more actionable insights for app developers and public health practitioners than previous app studies, which often lacked rigorous evaluation frameworks.

The implementation of health habits in this study will be measured basis the adoption of a new habit, the frequency of practice (per week) and the duration of practice per session. These specific outcome parameters have not been explored in a Dinacharya interventional trial before. A study by Reddy et al retrospectively explored the first Dinacharya practice i.e. Bramha Muhurta utthisthet (waking up early at pre-dawn) and its effect on health outcomes.[30] Another study explored a standalone Dinacharya practice of Ushapana (warm water ritual).[31]

This protocol has presented the study rationale and the study design based on these very research gaps. Based on the developed app, study data and results, the discussion of the final study will be conducted in order to draw appropriate conclusions. An effort will be made to extract possible interpretations from the data before and after the study as well as differences between the two groups. Additionally, based on the findings from this study conclusions will be drawn and future research investigations, if any will be recommended accordingly. It is the ambition of this study to contribute to the growing interest in interactive preventive healthcare through Ayurveda and to the ongoing research in this area by exploring the relevance and methods of implementation tailored to the modern era, yet based on authentically verified details from the classical texts.

The strengths of the study are the unique Dinacharya questionnaire that may serve as a research tool for others, the development of a one-of-a-kind interactive Dinacharya app with exclusive features like tracking, standardized SOPs, and authentic textual references and health information for users. The general purpose is to study a digital strategy to implement preventive measures of Ayurveda with reference to Dinacharya in a practical, currently relevant, and relatable and evidence-based technique for the future benefit of general public looking to be proactive about self-care, educators, doctors, students and researchers in the field of Ayurveda. The limitations of the study include a smaller sample size and the fact that the app will not be multilingual, due to feasibility. The developed App may serve as a research tool for future research studies in the field of Ayurveda. In clinical settings, physicians may be able to use the app to yield better patient outcomes concurrent with their treatment. The course of this study will also help find possible unknown challenges in digitization of such data and help in the formulation of strategies for future development of Ayurveda based mobile apps.

CONCLUSION

Compared to previous studies, the present protocol offers a more comprehensive, technology-enabled approach to promoting Dinacharya. By focusing on both quantitative and qualitative outcomes, this study will advance the understanding of how digital tools can enhance the adoption of traditional health practices and contribute to public health and preventive care in the future. This study,

designed to test the utility and usability of a Dinacharya-based mobile health app, is not only a one-of-a-kind attempt in this space in the Ayurveda field (until the date of this study), but it serves as a first step towards encouraging designing interactive, AI based digital tracking apps as tools for ancient Ayurvedic wisdom, for practical public health implementation. This study will not only assess how effectively the app supports users in tracking and adhering to Ayurvedic daily regimens but also collects subjective user perspectives to understand real-world engagement, limitations, challenges and satisfaction. By identifying both user-reported experiences and technical challenges encountered during app development – such as translating traditional Ayurvedic wisdom into accessible digital formats – the study provides critical insights for future digital health endeavours, in this field. These findings will help researchers anticipate and address obstacles in integrating traditional sciences with modern technology, ultimately guiding the creation of more user-friendly, culturally relevant health apps and strengthening the foundation for future research in digital Ayurveda and holistic preventive care.

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