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DESIGNING AND VALIDATION OF SHUDDHA ARTAVA LAKSHANA QUESTIONNAIRES SCALE(SALQ)

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ABSTRACT

Women represent the cornerstone of a family's overall health. Healthy women, Healthy world embodies that women are custodians of family health; they play a critical role in maintaining the health and overall wellbeing of community. In *Ayurveda* word "*Artava*" denotes menstrual blood. *Artava* is related to 2 seasons i.e., it may be due to presence of *Ritukala* (ovulation period) and *Rajakal* (menstruation period) in women. Human body is controlled by the three energies called *Tridoshas* - *Vata*, *Pitta* and *Kapha* which are characterized under seven *Dhatus*. These *Dhatus* have *Updhatus* also. *Artava* (menstrual blood) is one of the *Updhatus* of *Rasa Dhatu*.[1] The specific characteristics of menstrual blood with its physiological and pathological variation described in *Ayurveda* classics as *Shudhartava* and *Artavdhusti* respectively help in identifying the hormonal status of women. *Shudhartava* plays crucial role in maintaining women's healthy reproductive life. When *Artava* is not quite same as highlights of *Shudhartava* mentioned in classics then there may be *Artavdushti* or menstrual abnormalities like dysmenorrhoea, menorrhagia, amenorrhoea etc uterine disorders like endometriosis, adenomyosis, uterine fibroid, etc which may be cause of infertility. *Ayurveda* classics explains about colour, texture, specific smell, amount and other associated features like type of pain in various *Artavdushti*. So, only by observing menstrual blood variation we can find out the disease associated with it. Thus, study of *Artava* and *Artavdhusti* plays a very significant role in diagnosis of pathological disorders related with female reproductive system.

Key words-Artava,Amenorrhea,Artava dusti, Shuddha artava

INTRODUCTION

Life (Ayu) is the integration (Samyoga) of the body, senses, mind, and the reincarnating soul. [1]Ayurveda is a profound science of life that offers benefits for both this world and the afterlife.[2]

Ayurveda aims to both maintain optimal health and address pathological conditions[3]. To treat any disease, understanding its pathology—essential for diagnosis and treatment—is crucial. [4]Ayurveda classics describe various methods of examination (Pariksha) for diagnosing diseases, including gynecological disorders[5]. In gynecological pathologies, Artava, or menstrual blood, serves as a critical indicator of underlying issues.[6] While Artava generally refers to menstruation, menstrual blood, ovum, and ovarian hormones within the context of Ayurveda[7], Artavadushti (menstrual abnormalities) acts as a primary diagnostic tool for various menstrual disorders[8].

Ayurveda focuses on maintaining optimal health and treating pathological conditions. Understanding the pathology of a disease is vital for accurate diagnosis and effective treatment. Ayurvedic texts outline several methods of examination (Pariksha) for diagnosing various conditions, including gynecological disorders. In

the realm of gynecology, Artava—referring to menstrual blood—plays a crucial role in identifying underlying issues. Although Artava encompasses menstruation, menstrual blood, ovum, and ovarian hormones within Ayurveda, Artavadushti (menstrual abnormalities) is a key diagnostic tool for assessing different menstrual disorders.

In the Chakrapani Tika, it is stated that the formation of Artava begins during fetal development[9]. By the 3rd to 4th week of gestation, primitive germ cells start developing, rapidly dividing through mitosis to become oogonia, reaching about 7 million by the 20th week[10]. This indicates the presence of Artava during fetal life. At birth, all oogonia are replaced by primary oocytes, which have completed the prophase of the first meiotic division and remain in a resting phase (dictyate stage) between prophase and metaphase[11]. These primary oocytes do not complete the first meiotic division until puberty[12].

According to Acharya Vagbhata's explanation, this is akin to the concept of gandha (fragrance) which is not evident in a bud until it matures into a flower[13]. Similarly, before puberty, oocytes remain in a dormant stage. However, out of the approximately 2 million oogonia present at puberty, only about 400 will ovulate throughout the reproductive years, influenced by hormones such as FSH, LH, estrogen, and progesterone[14]. This entire process of formation, development, and function after puberty aligns with Acharya Sushruta's description of the appearance of "artava punaha" (menstruation) around the age of 12, providing a suitable explanation for the onset of menstruation[15]

MATERIALS AND METHODS

DESIGNING AND VALIDATION OF SHUDDHA ARTAVA LAKSHANA QUESTIONARIES

A questionnaire for evaluating Shuddha artava lakshana uwas created considering the lack of instruments for administering Artava dustis and its significance for health maintenance and disease treatment. The *AstangaHrudaya Samhita*, an authoritative *Ayurvedic* source, was thoroughly searched both printed and electronically for this, and the Lakshanas of Shuddha artava Lakshana were considered when creating the questionnaire.

Research Questions:

To Design and validate the Shuddha artava lakshana scale (SALQ) based on the description *Lakshanas* of the Artava present.

Scale and Response format

The questionnaire was framed in a close-ended Likert format with five options for each question, i.e., Often, Sometimes, Rarely and I used gradings as follows: 4 is Always, and three (3) is Often, 2 is Sometimes, 1 is Rarely

VALIDITY

FACE VALIDITY

Face validity assesses how valid a tool appears at first glance. It is evaluated based on factors like readability, clarity of wording, layout and style, and feasibility. Essentially, face validity examines whether the questionnaire seems appropriate for its intended purpose and content area, though it is considered the weakest form of validity. It focuses on the overall presentation of the questionnaire, including readability, stylistic consistency, and language clarity.

Content Validation:

Content validation assesses how well each item in a tool aligns with the intended concept. This is typically done using qualitative methods. For the Shuddha artava Lakshana survey, content validation involved reviewing references from the Astanga Hrudaya Samhita and consulting Ayurvedic experts. These experts evaluated the variables and their measurement properties to ensure they accurately reflect the dominance of certain Dosha factors. Each expert completed a shuddha artava lakshana Assessment Questionnaire and provided feedback on how effectively each variable identifies Shuddha Artava Lakshanas.

Construction validity

The expert panel reviewed each question on the Shuddha artava lakshana Assessment Questionnaire to test its construct validity. To evaluate the feasibility of Shuddha artava lakshana the scale, the standard reference from the Astanga Hrudaya Samhita was adapted into 10 questions. The panel of experts assessed each question for feasibility using a standardized clinical method that involved inspection and questioning. The analysis confirmed that all questions were effective in achieving their intended purpose. After analysing the scaled factor analysis test, KMO BARTETT TEST is used.

RELIABILITY:

Internal Consistency:

Internal consistency measures whether different items within the same test or sub-scale consistently assess the same general construct. It is typically evaluated using correlations between item pairs and is commonly quantified with Cronbach's alpha. For this questionnaire, Cronbach's alpha values range from 0.651 to 0.806, indicating acceptable internal consistency.

Factor Analysis:

Factor analysis refers to a set of techniques used to reduce and summarize data. It examines the interdependencies among variables without distinguishing between dependent and independent variables. This method is useful for several purposes:

- To identify a smaller set of uncorrelated variables for subsequent multivariate analysis, replacing a larger set of correlated variables.
- To uncover underlying dimensions or factors that explain the relationships between variables.
- To narrow down a broad range of variables to select significant ones for further analysis.

The appropriateness of factor analysis is assessed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. A KMO value of 0.529 suggests that the data is suitable for this analysis. Factor analysis helps in summarizing and reducing data, determining underlying dimensions, and refining a large set of variables into a more manageable subset for further study.

Validity:

The questionnaire was administered to 30 individuals to assess face validity. This evaluation focused on the clarity of the wording, layout and style, and overall feasibility. The participants demonstrated a clear understanding of the questionnaire, indicating that face validity was satisfactory.

Content Validity:

Content validity was further scrutinized by Ayurvedic experts. They reviewed the questionnaire's design and style by distributing the completed forms to 30 healthy volunteers. An expert panel examined the Shuddha Artava rating scale to ensure it could be applied effectively using standard clinical methods, such as control or questionnaires.

Factor analysis was conducted to explore the relationships between various sets of variables within the questionnaire. A correlation matrix was developed, with a Kaiser-Meyer-Olkin (KMO) coefficient above 0.677 deemed appropriate for the study. Reliability was assessed using Cronbach's alpha, which yielded a value of 0.787, indicating excellent internal consistency. Overall, the questionnaire demonstrated good feasibility, readability, consistency in style and formatting, and clarity in language.

Reliability Statistics

Cronbach's Alpha	N of Items
.787	10

TABLE NO: 1 (TABLE SHOWING THE VALVE OF CRONBACH'S ALPHA)

Factor Analysis:

The **KMO Bartlett's Test** valve is .677, and the valve is 0.000, which is highly significant

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.677
Bartlett's Test of Sphericity	Approx. Chi-Square	107.097
	df	45
	Sig.	.000

Descriptive Statistics

	N	Mean	Std. Deviation
SALQ1	30	2.3667	1.06620
SALQ2	30	2.8333	1.11675
SALQ3	30	2.5333	1.10589
SALQ4	30	2.8333	.94989
SALQ5	30	3.0667	.90719
SALQ6	30	3.1333	.62881
SALQ7	30	3.5333	.50742
SALQ8	30	3.5000	.73108
SALQ9	30	3.5333	.57135
SALQ10	30	3.7241	.45486
Valid N (listwise)	30		

DISCUSSION

The process of standardizing and validating the Shuddha Artava questionnaires demonstrated strong results in terms of validity and reliability. The face validity assessment confirmed that the questionnaires were well-understood by participants, while content validity ensured that the questionnaires accurately reflected Ayurvedic concepts.

The reliability analysis, including Cronbach's alpha and factor analysis, supported the internal consistency of the questionnaires and their capacity to capture the relevant dimensions of Shuddha Artava Lakshana. The use of expert feedback and statistical techniques provided a robust framework for validating the questionnaires, ensuring they are both effective and reliable tools for assessing these conditions.

Conclusion:

The standardized and validated Shuddha Artava questionnaires offer a reliable and valid means of evaluating these conditions. The thorough validation process, including assessments of face validity, content validity, and reliability, has established these questionnaires as effective tools for clinical and research purposes. Future work may involve additional testing in diverse populations to further confirm their applicability and effectiveness across different settings.

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