



The Effect of Wedang Uwuh on Mood Changes in Customers After Traditional SPA Treatment

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ARTICLE INFO	ABSTRACT
<p>Article history: Received: 21 January 2026 Received in revised form: 19 February 2026 Accepted: 6 March 2026 Available online: 2 June 2026</p> <p>Keywords: Wedang Uwuh; Traditional SPA; Mood</p>	<p>Type This study examines the effect of Wedang Uwuh consumption on mood after a SPA treatment. A quasi-experimental design compared two groups: a control group (K1) receiving SPA only and a treatment group (K2) receiving SPA plus Wedang Uwuh. Forty women aged 20–50 were evenly assigned to the two groups. Mood was assessed using a 10-item observation questionnaire scored on a 0–3 scale; total scores were categorized as low (0–9), moderate (10–20), and good (21–30). Results showed that in K1, 60% were in the good category and 40% in the moderate category; in K2, 90% were good and 10% moderate. No respondents fell into the low category in either group. These findings confirm that traditional SPA treatment improves mood, while the addition of Wedang Uwuh provides a more meaningful enhancement. Conclusion: Post-SPA consumption of Wedang Uwuh is effective in improving mood compared with SPA alone. Recommendation: Integrate this traditional herbal beverage into SPA services to strengthen relaxation, enrich the treatment experience, and preserve local wisdom. The implication is that culture-based SPA programs become more valuable for both clients and the community.</p>

1. Introduction

Mental health and emotional well-being [1] have become increasingly important concerns in contemporary society, especially in urban environments where individuals are frequently exposed to high work demands, rapid social change, and intense daily mobility. These conditions often contribute to persistent stress, anxiety, emotional fatigue, and reduced psychological stability [2]. When such emotional strain is not properly managed, its effects may extend beyond mental discomfort and influence broader aspects of health and daily functioning, including sleep quality, productivity, immune response, and interpersonal relationships. For this reason, the promotion of emotional balance has become an essential part of holistic health care, and there is a growing need for supportive interventions that are safe, non-invasive, and culturally relevant.

In response to this need, relaxation-based therapies have received growing scholarly and practical attention [3]. Among them, SPA treatment [4] has developed from a beauty-oriented service into a more holistic wellness approach that addresses physical, emotional, and psychological well-being simultaneously. Traditional SPA practices generally combine massage, aromatic

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stimulation, body treatments, and herbal-based care to create a multidimensional relaxation experience. Previous studies have shown that SPA-related interventions may help reduce muscle tension, improve blood circulation, stimulate parasympathetic nervous system activity, and support the reduction of stress responses in the body. As a result, individuals often experience improved mood, better sleep, and reduced feelings of anxiety after treatment. These findings suggest that SPA therapy may serve not only as a leisure activity but also as a promotive strategy for maintaining emotional stability and overall well-being.

Within this broader context, the role of traditional and locally rooted wellness practices [5] has become increasingly relevant. Indonesia possesses abundant herbal resources and a strong tradition of body care and natural healing, offering considerable potential for the development of SPA services grounded in local wisdom. Such an approach is important not only for expanding wellness innovation, but also for strengthening cultural identity and supporting the economic value of wellness tourism [6]. In this regard, integrating indigenous herbal elements into SPA practice can provide a more distinctive and meaningful therapeutic experience. However, despite this potential, research on culturally based SPA innovation remains relatively limited, particularly in relation to how traditional herbal consumption may complement external body treatments in producing emotional benefits.

One herbal element [7] that deserves greater attention is Wedang Uwuh [8], [9], a traditional drink originating from Yogyakarta and composed of several spices such as ginger, sappan wood, cloves, nutmeg, and cinnamon. This beverage has long been known in local tradition as a warming and restorative herbal drink. Scientifically, these ingredients are associated with a range of beneficial physiological properties, including improved circulation, anti-inflammatory effects, body warming, and relaxation support. In addition, several bioactive compounds found in these spices, such as gingerol, eugenol, and cinnamaldehyde, are reported to have calming and regulatory effects that may help the body recover from stress and restore internal balance. These characteristics indicate that Wedang Uwuh may function as more than a traditional beverage; it may also serve as a complementary component in wellness-oriented interventions that seek to improve emotional state.

The potential value of Wedang Uwuh [10], [11], [12] becomes even more relevant when considered in combination with SPA treatment. While SPA therapy mainly works through external sensory and physical stimulation, such as touch, warmth, aroma, and muscular relaxation, Wedang Uwuh may provide an internal physiological response through the action of its herbal compounds. This combination suggests a more integrated relaxation model in which external treatment and internal herbal intake work together to support emotional recovery. From a scientific perspective, this integrated approach is meaningful because mood improvement after SPA may not only be shaped by massage or aromatherapy alone, but also by complementary factors that influence the body's internal comfort and regulation. Nevertheless, this combined perspective has not yet received sufficient empirical attention.

Most previous studies have focused either on the general benefits of SPA treatment [13] or on the therapeutic properties of individual herbal ingredients. While these studies provide valuable foundations, they do not fully explain how a traditional herbal drink such as Wedang Uwuh may contribute to post-SPA mood change when used within a holistic relaxation setting. In other words, the collaborative use of herbal consumption and SPA ritual has remained underexplored. This limitation is important because wellness experiences in real practice are often multidimensional, involving physical treatment, sensory stimulation, and internal consumption at the same time. Therefore, examining Wedang Uwuh within the context of SPA treatment may help address an

overlooked aspect of holistic wellness and provide a more contextually grounded understanding of mood-related outcomes.

Based on this gap, the present study proposes an empirical examination of the effect of Wedang Uwuh consumption on mood changes after traditional SPA treatment. The study is expected to contribute to the development of evidence-based SPA services rooted in Indonesian local wisdom, while also enriching the discourse on holistic health, emotional well-being, and culturally grounded wellness innovation. In addition, the findings may offer practical implications for SPA practitioners and wellness developers who seek to combine traditional herbal knowledge with contemporary health approaches in a scientifically accountable way.

This study therefore aims to analyze whether the consumption of Wedang Uwuh influences mood improvement after traditional SPA treatment. To achieve this objective, the research employs an empirical approach to observe mood changes following treatment and herbal consumption. Through this approach, the study seeks to provide a clearer scientific basis for the integration of traditional herbal beverages into SPA practice and to support the broader development of holistic wellness services that are culturally meaningful and therapeutically relevant.

2. Method

This study employed a quasi-experimental design[14] using a pre-test-post-test control group design. This design was selected because it allows the researcher to examine the effect of an intervention by comparing participants' conditions before and after treatment in both control and experimental groups, even when full random assignment is not possible. In the present study, the design was considered appropriate for assessing the effect of Wedang Uwuh consumption on mood changes following traditional SPA treatment. By using pre-test and post-test measurements, the study was able to capture the direction and magnitude of mood changes resulting from the intervention.

Table 1. Standardized Preparation of Wedang Uwuh

Component	Amount per Serving	Function in Preparation
Fresh ginger	20 g	Main warming ingredient
Sappan wood	5 g	Provides color and herbal extract
Cinnamon bark	3 g	Adds aroma and warming effect
Cloves	2 g	Provides aromatic and spicy notes
Nutmeg leaves	2 g	Complements the herbal aroma
Rock sugar	10 g	Improves taste and palatability
Water	500 mL	Solvent for decoction

Table 1 presents the standardized formulation of Wedang Uwuh used[15] in this study. Each serving consisted of fresh ginger, sappan wood, cinnamon bark, cloves, nutmeg leaves, rock sugar, and water in fixed proportions. The selected ingredients represent the main herbal components commonly used in Wedang Uwuh preparation, while each component contributed a specific function, such as providing warmth, aroma, color, herbal extract, and palatability. The use of a standardized composition was intended to ensure consistency in the preparation and administration of the herbal drink for all participants in the treatment group.

Table 2. Preparation Procedure of Wedang Uwuh

Step	Procedure	Specification
1	Cleaning of ingredients	All ingredients were washed thoroughly under running water before preparation.
2	Mixing	All herbal ingredients were placed into a stainless-steel pot containing 500 mL of water.
3	Boiling	The mixture was boiled at 100°C for 15 minutes until the color and aroma were fully extracted.
4	Simmering	After boiling, the mixture was simmered for an additional 5 minutes over low heat to ensure uniform extraction.
5	Filtration	The decoction was filtered using a fine strainer to separate the liquid from the solid residues.
6	Serving	The drink was served warm at approximately 40–45°C immediately after preparation.

Table 2 describes the standardized procedure for preparing Wedang Uwuh used in this study. The preparation process consisted of six steps, namely cleaning the ingredients, mixing the herbal materials with water, boiling, simmering, filtration, and serving. Each step was carried out under the same conditions, including water volume, boiling duration, and serving temperature, to ensure uniform extraction of the herbal components and consistency in the drink administered to all participants in the treatment group[16].

The participants in this study consisted of 40 women aged 20 to 50 years. Respondents were selected by considering relative similarity in age range and physical condition in order to reduce the influence of external variables that might affect the results. The use of female participants only was intended to create a more homogeneous sample and to minimize variations that could arise from broader demographic differences. After the selection process, the respondents were divided equally into two groups. The control group (K1) consisted of 20 participants who received only traditional SPA treatment, while the treatment group (K2) consisted of 20 participants who received the same SPA treatment combined with Wedang Uwuh consumption. This grouping was intended to provide a balanced comparison between participants who experienced SPA treatment alone and those who received an additional herbal intervention.

The instrument used in this study was a mood observation questionnaire designed to assess the respondents' emotional condition before and after treatment. The instrument measured 10 mood indicators, with each indicator scored on a scale of 0 to 3. As a result, the total score ranged from 0 to 30, with higher scores indicating a more positive mood condition. Referring to Matthews et al. (1990), the total score was classified into three categories: low mood (0–9), moderate mood (10–20), and good mood (21–30). This scoring system was chosen because it provided a simple but measurable way to quantify emotional changes and enabled the researcher to compare respondents' mood conditions across the two measurement points.

Before the intervention was implemented, respondents were first screened according to the inclusion criteria. The study included healthy adult women who had no history of serious illness, psychological disorders, or other medical conditions that could interfere with mood assessment or participation in SPA treatment. This screening process was important to ensure that the respondents were physically fit to undergo the treatment procedure and that their mood condition would not be heavily influenced by unrelated health factors. After the respondents met the inclusion criteria, they were enrolled in the study and assigned to either the control group or the treatment group.

The research procedure consisted of several stages. First, all participants completed the pre-test, which was conducted before any treatment was administered. The purpose of the pre-test was

to identify the participants' initial mood condition and to determine whether the two groups were relatively comparable at baseline. Establishing baseline equivalence was important because it strengthened the interpretation that any subsequent change in mood was more likely to be associated with the intervention rather than with pre-existing differences between groups.

In the treatment stage[17], participants in the control group (K1) received traditional SPA treatment according to the standard procedure established by the researcher or service provider. Meanwhile, participants in the treatment group (K2) received the same traditional SPA treatment, but it was accompanied by the consumption of Wedang Uwuh as a complementary intervention. The use of the same SPA procedure in both groups was intended to maintain treatment consistency so that the main difference between the groups lay in the addition of Wedang Uwuh. In this way, the study could more clearly examine whether the herbal drink contributed to greater mood improvement beyond the effect of SPA treatment itself.

After the intervention was completed, all participants underwent a post-test using the same mood observation questionnaire. The post-test was administered to measure any changes in emotional condition after the SPA session, with or without Wedang Uwuh consumption. By comparing the pre-test and post-test scores, the researcher could identify whether mood improvement occurred within each group. In addition, by comparing the magnitude of change between the two groups, it was possible to evaluate whether the treatment group experienced greater mood enhancement than the control group.

The data were analyzed quantitatively using two statistical procedures. First, a Paired Sample t-Test was applied to examine differences in mood scores within each group between the pre-test and post-test. This test was used to determine whether the intervention produced a statistically significant change in mood among participants in the same group. Second, an Independent Sample t-Test was conducted to compare the differences in mood change between the control group and the treatment group. This analysis was intended to determine whether the addition of Wedang Uwuh resulted in a significantly different effect compared with SPA treatment alone. The use of these two tests was considered appropriate for a quasi-experimental design involving two groups and two measurement times.

Overall, this methodological approach allowed the researcher to examine the effect of Wedang Uwuh in a structured and measurable way. Through the comparison of baseline and post-intervention scores, as well as between-group differences, the study was expected to provide empirical evidence regarding whether the consumption of Wedang Uwuh could support mood improvement after traditional SPA treatment.

3. Results and Discussion

3.1. Results

The characteristics of the respondents are presented in Table 1. The study involved 40 female participants aged 20–50 years, with 20 respondents in the control group (SPA only) and 20 respondents in the treatment group (SPA + Wedang Uwuh). The majority of respondents were in the 20–25-year age group, accounting for 77.5% of the total sample. In the control group, 80% of respondents were aged 20–25 years, while in the treatment group, 75% were in the same age range. Smaller proportions were found in the age groups of 26–30 years, 31–35 years, and 36–40 years. No respondents were in the 41–50-year age group. These findings indicate that the participants were predominantly young adult women.

Table 3. Characteristics of Female Respondents Aged 20–50 Years

Age (years)	K1 (SPA only) n (%)	K2 (SPA + Wedang Uwuh) n (%)	Total n (%)
20–25	16 (80%)	15 (75%)	31 (77.5%)
26–30	2 (10%)	3 (15%)	5 (12.5%)
31–35	1 (5%)	1 (5%)	2 (5%)
36–40	1 (5%)	1 (5%)	2 (5%)
41–50	0 (0%)	0 (0%)	0 (0%)
Total	20 (100%)	20 (100%)	40 (100%)

The post-treatment mood distribution is shown in Table 2. After undergoing SPA treatment, no respondents in either group were categorized as having low mood. In the control group, 12 respondents (60%) were categorized as having good mood, while 8 respondents (40%) remained in the moderate mood category. In the treatment group, 18 respondents (90%) were categorized as having good mood, and only 2 respondents (10%) were in the moderate mood category. These findings indicate that both groups experienced positive mood outcomes after treatment, but the treatment group showed a higher proportion of respondents in the good mood category compared to the control group.

Table 4. Distribution of Respondents by Post-SPA Mood Category

Mood Category	Score	K1 (SPA only) n (%)	K2 (SPA + Wedang Uwuh) n (%)	Total n (%)
Low	0–9	0 (0%)	0 (0%)	0 (0%)
Moderate	10–20	8 (40%)	2 (10%)	10 (25%)
Good	21–30	12 (60%)	18 (90%)	30 (75%)
Total		20 (100%)	20 (100%)	40 (100%)

Overall, the results demonstrate that traditional SPA treatment was associated with an improvement in respondents’ mood, as reflected in the absence of low mood scores in both groups after treatment. However, the group that received SPA combined with Wedang Uwuh showed a more favorable distribution of mood outcomes, with a substantially higher percentage of respondents reaching the good mood category.

3.2. Discussion

The findings of this study indicate that traditional SPA treatment contributed positively to respondents’ mood improvement. The absence of respondents in the low mood category after treatment in both groups suggests that SPA itself produced a beneficial relaxation effect. This result supports previous studies showing that relaxation therapies such as massage and aromatherapy may reduce physical tension, stimulate parasympathetic nervous system activity, and promote psychological calmness (Septiani et al., 2019; Tumanggor et al., 2021). Through sensory stimulation, touch, and bodily relaxation, SPA treatment may help reduce stress-related responses and enhance emotional comfort.

Although SPA alone was associated with improved mood, the treatment group that consumed Wedang Uwuh after SPA demonstrated better outcomes than the control group. A total of 90% of respondents in the treatment group reached the good mood category, compared with 60% in the control group. This difference suggests that Wedang Uwuh may serve as a complementary intervention that strengthens the relaxing effects of SPA. The combination of external relaxation through SPA and internal support through herbal consumption appears to provide a more optimal emotional recovery process than SPA treatment alone.

One possible explanation for this finding lies in the bioactive compounds contained in Wedang Uwuh. Ingredients such as ginger and sappanwood contain compounds that are associated with warming effects, improved blood circulation, and greater bodily comfort. Gingerol in ginger and brazilin in sappanwood, for example, are believed to support relaxation and improve physiological comfort, which may in turn contribute to a more stable and positive mood (Dharma et al., 2020b; Lau et al., 2022). In this sense, the findings of the present study are consistent with the concept of holistic therapy, in which physical and psychological recovery occur simultaneously.

In addition to the pharmacological effects of the herbal ingredients, the psychological effect of consuming a warm drink may also help explain the higher mood improvement in the treatment group. Warm beverages are often associated with comfort, calmness, and relaxation. When consumed after SPA treatment, Wedang Uwuh may enhance the overall therapeutic experience by extending the sense of warmth and relaxation beyond the physical treatment session. This combination creates a more comprehensive relaxation sequence, beginning with sensory and muscular relief during SPA and continuing with internal comfort after the treatment.

The respondent profile also provides an interesting context for interpreting the findings. Most participants were young adult women aged 20–25 years, indicating that this age group may have a relatively strong interest in self-care activities such as SPA and traditional herbal consumption. This preference is in line with the broader lifestyle trend among younger adults, who are increasingly aware of the importance of mental well-being, natural healing, and emotionally restorative experiences. Therefore, the integration of traditional herbal drinks into SPA services may be particularly relevant for this demographic group.

From a practical perspective, these findings suggest a promising opportunity for the beauty, health, and wellness tourism industries to develop SPA services based on local wisdom. The integration of Wedang Uwuh into SPA treatment does not only enhance the relaxation experience, but also reintroduces traditional herbal culture into a contemporary wellness context. This approach may strengthen the distinctiveness and competitiveness of Indonesian wellness services while simultaneously supporting cultural preservation.

Overall, this study shows that SPA treatment has a positive effect on mood, and that this effect may be further enhanced by the consumption of Wedang Uwuh. The findings support the idea that combining modern wellness practices with traditional herbal knowledge can produce a more holistic and culturally meaningful intervention. Thus, the collaboration between SPA treatment and Wedang Uwuh has the potential to be developed as a sustainable model of holistic care in the health and beauty sector.

4. Conclusions

This study shows that SPA treatment improves participants' mood by reducing physical and emotional tension through massage, aromatherapy, and therapeutic touch. The findings confirm that SPA contributes not only to body care, but also to psychological well-being.

The results also indicate that the addition of Wedang Uwuh enhances this effect. While 60% of respondents in the SPA-only group reached the good mood category, the proportion increased to 90% in the group receiving SPA combined with Wedang Uwuh. This suggests that the traditional herbal drink can strengthen relaxation and emotional comfort after SPA treatment.

Conflict of interest

The authors declare no conflict of interest

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