Implementation of Tri Hita Karana with Socio-Cultural Ergonomic Oriented on the Kecak Dance Performance to Improve Community Health and Supporting Cultural Tourism in Peliatan Ubud Gianyar

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Abstract. The development of cultural tourism is an innovative activity carried out by the community in anticipation of the deterioration of tourism in Bali. The community empowerment model which is oriented to the concept of socio-cultural ergonomics combined with Tri Hita Karana's as a local wisdom is believed to be able to support the development of cultural tourism while at the same time able to nourish the community. The research objective is to find out the successful implementation of Tri Hita Karana program with the Socio-Cultural Ergonomic oriented which is realized in regular Kecak dance performances in overcoming the health conditions and healthy living habits of the people. This quasi-experimental study with treatment by subject design involved 32 subjects and selected by simple randomly. The data obtained were analyzed by paired t test at a significance level of 5%. The results showed that there was a significant increase in: (a) public awareness of their health conditions by 31.09%, (b) clean and healthy living behavior by 27.39, and (c) public awareness of the development of cultural tourism by 21.65% (p<0.05). The conclusion is that the implementation of Tri Hita Karana with socio-cultural ergonomic oriented in the performance of kecak dance, which can improve public health and support cultural tourism.

Keywords: Health, Socio-Cultural Ergonomic, Kecak Dance, Tri Hita Karana

1. Introduction

The development of cultural tourism is an innovative activity carried out by the community in anticipation of the deterioration of tourism in Bali. This tourism development as one of the models of community empowerment through the development of various existing potentials and at the same time as an effort to save the nation's valuable assets. The implementation of the Tri Hita Karana program based ergonomically oriented is a synergy between the concept of ergonomics with local wisdom which is believed that Tri Hita Karana can be used to teach humans to seek a harmonious relationship between humans and God, humans and humans, and humans and the natural environment.

Tri Hita Karana comes from the words Tri, Hita, and Karana. Tri means three, hita means happy, and karana means cause. That means Tri Hita Karana is three causes of happiness. Tri Hita Karana is
used as a teaching that teaches humans to seek a harmonious relationship with God, with fellow human beings, and with their natural environment. Tri Hita Karana is also interpreted as Parahyangan which is a place of worship of Hinduism which is used to connect human beings with God, Pawongan is a medium for building harmonious relationships with fellow humans, and Palemahan is a medium for building harmonious relationships with the natural environment [1-4].

Community empowerment through the implementation of Tri Hita Karana based on socio-cultural ergonomic oriented and its contribution in improving health conditions and healthy living behavior of the community and in the development of cultural tourism is an innovative action in making the community healthy and at the same time developing cultural tourism. The basic problems found in the community are: (a) lack of public understanding of socio-culturral ergonomic principles associated with public concern for health conditions that can be improved through the implementation of Tri Hita Karana which is oriented to socio-cultural ergonomics in regular performance of kecak dance; (b) healthy living behavior does not yet refer to socio-cultural ergonomic principles that are believed to be overcome through the implementation of Tri Hita Karana; (c) lack of public awareness of the socio-cultural conditions that can support the development of cultural tourism through regular Kecak dance performances; (d) training has not been conducted through strategies related to the implementation of Tri Hita Karana based on socio-cultural ergonomic oriented; (e) there has never been a mechanism for evaluating public awareness of their health conditions and healthy living behaviors before and after the implementation of Tri Hita Karana which is oriented to socio-cultural ergonomics; and (f) it cannot yet be proven that the implementation of Tri Hita Karana based on socio-cultural-ergonomic oriented which is realized in regular Kecak dance performances that can increase public awareness of their health conditions and healthy living behavior. A participatory approach, in which all residents who take part in regular Kecak dance performances, are involved from an early age, are very appropriate to be used in overcoming this problem. Through a systemic, holistic, interdisciplinary and participatory (SHIP) approach, a healthy, safe, and comfortable environment will be formed and physiologically does not cause musculoskeletal complaints, does not result in workloads that are too heavy and can slow the emergence of fatigue and increase job satisfaction [5-7].

The application of ergonomics that strives to keep someone in a healthy, safe, and comfortable condition, and free from stress conditions and inadequate environmental conditions for activities, such as noise, pollutants, inadequate light intensity, ambient temperature that is too hot or cold, and inadequate air circulation, which is urgent to be implemented and must be implemented as soon as possible [5-11]. If this is ignored, then the quality of public health is believed to be disrupted and even can cause deformity in body organs and ultimately will reduce work productivity. One of the ways that can be taken so that the community is always in a healthy, safe, comfortable, effective and efficient condition and has a caring attitude towards their health requires ergonomic rules that synergize with local wisdom in the form of Tri Hita Karana. If this is not done, it will cause various kinds of disorders and diseases that affect one's health, for example: (1) disruption of human body mechanics in general, especially in the musculoskeletal system and muscular system, (2) pain in the vertebrae (spine), (3) deformity or degeneration in the intervertebral discs which is at risk of causing low back pain, (4) fatigue occurs more quickly, (5) workload which is assessed from the pulse frequency will increase, and (6) appears Carpal Tunnel Syndrome (CTS) [12-20].

The potential for the development of cultural tourism through regular Kecak dance performances is actually a great capital for the community in Peliatan Village which can simultaneously make the community healthy. Community's lack of understanding to develop the tourism which is associated with the health element, resulted in hesitation to start it. This fundamental problem seems to be overcome through community empowerment training by implementing of Tri Hita Karana based on socio-cultural ergonomic oriented. In the training it was emphasized that the principles of ergonomics contained in the regular performance of the Kecak dance are always used as a reference in improving public health conditions which will also have implications for the development of cultural tourism.
2. Materials and Methods
This experimental study used a randomized post test only group design that involved 32 samples chosen by simple random sampling. The independent variable of research is the implementation of Tri Hita Karana oriented to socio-cultural ergonomics. The dependent variables of the study are: (1) community awareness of their health conditions, (2) community healthy living behavior, and (3) community concern for the development of cultural tourism. Health care, clean and healthy life behavior, and care for the development of cultural tourism were recorded with a Likert scale questionnaire.

Data of concern for health conditions, healthy living behaviors, and concern for the development of cultural tourism were analyzed by paired t-test at a significance level of 5%. The data is compared between before and after the implementation of Tri Hita Karana oriented to socio-cultural ergonomics.

3. Results and Discussion
The results of descriptive analysis of the variables of concern for health, clean and healthy living behavior, and concern for the development of cultural tourism can be seen in Table 1.

| Variables                          | Period I | Period II | Decision     |
|-----------------------------------|----------|-----------|--------------|
| Mean | SD | Mean | SD |                  |
| 1. Concern for health conditions | 74.92    | 1.585    | 98.21        | 1.250         | Increase 31.09% |
| 2. Clean and healthy life behavior| 55.03    | 1.959    | 70.10        | 1.669         | Increase 27.39% |
| 3. Concern for the development of cultural tourism | 86.24    | 1.761    | 104.91       | 1.624         | Increase 21.65% |

Hypothesis test results to determine the effectiveness of the implementation of Tri Hita Karana oriented to socio-cultural ergonomic in the performance of kecak dance can be seen in Table 2.

| Variables                          | Before Implementation (Period I) | After Implementation (Period II) | t   | p       | Decision    |
|-----------------------------------|---------------------------------|---------------------------------|------|---------|-------------|
| Mean | SD | Mean | SD |                         |           |
| 1. Concern for health conditions  | 74.92 | 1.585 | 98.21 | 1.250 | 65.010 | 0.0001 | Significant |
| 2. Clean and healthy life behavior| 55.03 | 1.959 | 70.10 | 1.669 | 32.808 | 0.0001 | Significant |
| 3. Concern for the development of cultural tourism | 86.24 | 1.761 | 104.91 | 1.624 | 37.776 | 0.0001 | Significant |

The first findings in this study indicate that an effective and efficient strategy in community empowerment is through a Systemic, Holistic, Interdisciplinary, and Participatory (SHIP) approach that is integrated with Appropriate Technology which includes: (1) technically biased, (2) economically accessible, (3) can be accounted for health, (4) not socially conflicting, (5) saving energy, and (6) environmentally friendly. These six Appropriate Technology studies when combined with the SHIP approach produce changes in people's attitudes and behavior, especially those related
to health and the development of cultural tourism. Related to this strategy, Sutajaya [2] and Ruliati, et al., [4] stated that humans as the center of Tri Hita Karana must begin to learn to be grateful for the work they have obtained. Humans who are always grateful for the achievements and prestige they achieve are people who are steadily heading for prosperity. That means that success or failure in implementing the concept of Tri Hita Karana in supporting life and human life is dependent on the human element.

The second finding in this study shows that community awareness of their health conditions increased 31.09%, between before and after the implementation of Tri Hita Karana oriented to socio-cultural ergonomics. It can occur as a result of public awareness about the importance of keeping the environment clean, healthy, and sustainable as an external caring attitude that is combined with an internal caring attitude that always keeps the body healthy, fresh, and fit.

Internal health care attitudes includes: (1) A person's efforts to maintain body weight under normal conditions, (2) consideration of the amount of food consumed each day. (3) One's effort to maintain personal hygiene. (4) Exercise routinely three times a week. (5) An attempt to balance between the number of calories consumed and those used for activities. (6) Routinely do health checks to the doctor, (7) always pay attention to foods that are fit for consumption. (7) Boil water before consuming it as water drinking. (8) Avoiding food containing preservatives, chemical dyes, and flavorings. (9) Washing food ingredients with running water. (10) Avoiding consuming drinks packed in cans or bottles. Related to the internal health care attitude which is the realization of the implementation of Tri Hita Karana oriented Socio-cultural Ergonomic, Sutajaya [21], Ruliati, et al. [3], and Ruliati, et al. [4] emphasize that humans are said to be living things that have Bayu (strength), Sabda (ability to speak), and Idep (ability to think). Through these three abilities, humans can plan their activities. Through careful planning humans will be able to develop themselves in a more advanced and more professional direction accompanied by efforts to keep their bodies healthy, fresh, and fit.

External health care attitudes includes: (1) One's efforts to maintain environmental cleanliness. (2) One's efforts to plant plants that can filter out pollutants. (3) One's efforts to dispose of trash in their place. (4) One's efforts to plant crops fruit in the yard intended for the family. (5) A person's effort to grow vegetables in the yard intended for the family. (7) Trying to eradicate the Mosquito Nest once a week, (8) trying to eradicate the animals that can spread the disease. (9) Trying to avoid pollutants in the form of dust. (10) Trying to avoid pollutants in the form of gases, (10) trying to avoid pollutants in the form of loud noises. (11) Trying to avoid pollutants in the form of burning smoke. (12) Using paving blocks in the yard so that water infiltration runs smoothly. (13) Growing plants in watery pots equipped with their larva predators muk. (14) When using pesticides when eradicating plant pests in the home yard with applicable health rules. (15) When using mosquito eradication pesticides in the room always open ventilation.

Associated with the attitude of health care that is external which is the realization of the implementation of Tri Hita Karana oriented Socio-cultural Ergonomic. Sutajaya [21], Ruliati, et al. [3], and Ruliati, et al. [4] emphasize that the right attitude of life according to the Hindu view is all efforts to balance between trust and devotion to God through sincere devotion to fellow human beings and the universe. The teaching is very relevant to the concept of ergonomics which emphasizes the human relationship with the surrounding environment. Habits of people in Bali when cutting down large trees always plant the top of the plant above the tree felling. That was done as a symbol of public concern for environmental conditions, where when they knocked down a large tree which is an oxygen factory on earth, they consciously tried to replace these plants with new plants so that the oxygen plant remained. An example of such community attitudes is as one realization of the relationship between humans and their natural environment. If this can be realized then the happiest are humans. Sutajaya [21] also reinforce these findings through the concept of Satyam, Siwam, Sundaram can be explained that Satyam is the highest truth, Siwam is purity, and Sundaram is a beautiful and harmonious life. That means that the socio-cultural ergonomic goal is for human well-being to be synergized with the concept of Satyam, Siwam, Sundaram who both want to create harmony on this earth through harmonious relations between humans and God, between humans and
humans, and between humans and humans universe. Human welfare can be achieved through
harmony and the highest truth and purity of birth and mind. Gratitude that is often forgotten by greedy
people often makes it sink to the brink of collapse so that prosperity will be difficult to achieve. For
this reason, humans as the center of Tri Hita Karana must begin to learn to be grateful for the results
obtained. Humans who are always grateful for the achievements and prestige they achieve are people
who are steadily heading for prosperity. That means that success or failure in implementing the
concept of Tri Hita Karana in supporting life and human life is dependent on the human element.

The third finding in this study shows that the Clean and Healthy Lifestyle in the community
increased by 27.39%. That can happen because in the Tri Hita Karana training the Socio-cultural
Ergonomic orientation is emphasized that the goal of human life is to achieve happiness and physical
and spiritual well-being. The purpose of life will be achieved through humane hard work that is
working in accordance with the limitations, abilities, and human ability. The human word that is
meant is work knows no fatigue, but if you are tired you must rest. If this can be done humans will
achieve happiness. These findings are synergized with statement of Wiana [1] which states that
happiness is characterized by behavior: (1) Can laugh widely if there is something to be laughed at.
(2) Can attract children's joy. (3) Can see only the best in others. (4) Willingly undergo suffering for
the betrayal of friends. (5) Making the world a better place to live than when humans were born. (6)
Understanding that the soul (Atman) that resides in the human body will be able to breathe more
easily when born into the world.

Clean and Healthy Life Behavior in the community is assessed based on: (1) A person's attention
to the number of calories of food consumed. (2) Sports activities carried out after consuming
excessive food. (3) Use of PAM water for bathing, washing, and latrines. (4) Use of family toilets that
are always kept clean. (5) Routine cleaning of latrines with detergents after defecation or urinating.
(6) Placement of trash bins around the yard of the house to facilitate disposal of trash. (7) Routine
control the trash in the yard so that the garbage does not rot. (8) The mechanism of household waste
disposal through garbage transportation services. (9) Adequate effort to maintain the cleanliness of
the floor of the house. (10) Adequate effort to maintain the cleanliness of the yard. (11) Adequate
efforts to maintain cleanliness around the yard. (12) Routines in exercising to maintain fitness. (13)
Habit and washing hands with soap after completing activities by hand. (14) Routines for brushing
teeth after eating. (15) Firmness in declaring anti-drug in any form. (16) Firmness in expressing anti-
liquor in any form. (17) A statement of ownership of Health Care Security (JPK). (18) Routine
activities in the Eradication of Mosquito Nest which is carried out once a week. All of these indicators
are used as an assessment of changes in Clean and Healthy Behavior in the community after  they are
empowered through the Socio-cultural Ergonomic oriented Tri Hita Karana training. These findings
are synergized with research Gani, et al., [22] which reported that Clean and Healthy Behavior was
assessed based on: (a) healthy latrine use behavior by 54%, (b) unfavorable toilet use behavior by
37%, (c) poor latrine use behavior by 9%, (d) clean water usage behavior by 94%, and (e) behavior of
not using trash bins by 63%. Umaroh, et al., [23] also reported that: (1) The lowest Clean and Healthy
Behavior indicator coverage, namely the availability of trash bins (37.58%), JPK ownership
(49.43%), no smoking (52.81%), and Eradication of Mosquito Nest (56.65% ). (2) The coverage of
the Clean and Healthy Behavior indicator with the highest value is not alcoholic or not drugs
(96.28%) and the availability of clean water (94.88%). (3) indicators of ownership of trash bins
(26.96%) in Gentan village was the lowest achievement of all indicators in the three villages studied
(4) the indicator of no alcohol or no drugs (99.1%) in Kedungsono village was the highest
achievement of all indicators in the three villages studied.

The fourth finding in this study shows that community awareness of the development of Cultural
Tourism increased by 21.65% between before and after community empowerment through the Socio-
cultural Ergonomic oriented Tri Hita Karana training. In the training it was emphasized that public
awareness of Cultural Tourism can be built through indicators: (1) Community participation in the
preparation of cultural tourism facilities and infrastructure. (2) Adequate efforts in participating in any
cultural activity that supports tourism. (3) Actively participating in cultural performances which
supports the development of tourism. (4) Adequate effort in exploring cultural potentials that are worth developing. (5) Adequate effort in inviting citizens to actively participate in the development of cultural tourism, (6) Adequate effort in preserving cultural products potential to support tourism development. (7) Adequate effort in preserving the valuable cultural heritage. (8) Adequate effort in reminding residents who will renovate ancient buildings in order to pay attention to their historical value. (9) Community participation in the development of cultural tourism programs. (10) Adequate efforts to promote cultural products that can support cultural tourism. (11) Community participation in regular performances that are part of cultural tourism. (12) Adequate efforts to encourage citizens to pursue one of the existing cultural potentials. (13) Adequate efforts to remind citizens to be more careful in accepting foreign culture. (14) Adequate effort in reminding the authorities to always apply the concept of restoration in repairing ancient buildings. (15) Adequate effort to invite every citizen to be aware of cultural heritage. (16) Adequate effort to invite every citizen to be willing to be part of the development of cultural tourism. (17) Adequate effort to invite every citizen to participate in cultural performances. (18) Adequate effort to invite every citizen to take part in preparing the facilities and infrastructure for the development of cultural tourism. (19) Community enthusiasm for participating in cultural performances. (20) Business undertaking adequate in interpreting the historical values contained in cultural products. (21) Community optimism in the development of cultural tourism in the area. (22) Community optimism in exploring the potential of culture that is selective and worthy of development.

These findings are synergized with the statement of Sutajaya [2] which states that ergonomic research that always involves humans in it certainly cannot be separated from the socio-cultural factors in which the person was born or raised. In a broad sense the concept of culture is defined as the totality of the thoughts, works and works of humans that are not rooted in their instincts and are triggered by humans after the learning process. It is this condition that requires people to care about the development of culture in their respective regions which in essence can be used as a tourist subject. In this case the development of cultural tourism cannot be separated from the character of the community which requires them to be sensitive to the cultural problems encountered in their daily lives. If it is wrong in interpreting cultural activities there may be a false assumption that culture can hamper progress. When in fact the noble culture inherited from the ancestors is actually very relevant to the current progress, because it has a uniqueness that cannot be found anywhere else. This uniqueness is what should be used as an added value from an area that has that culture.

Pitana [24] also corroborates the findings in this study which states that although tourism culture has become Balinese culture, and Bali has undergone a process of touristification, the cultural identity of Balinese people still remains, if not to say strong. Field findings also show that Balinese culture is still very strongly attached to Balinese identity and the concern that cultural nodes have been scattered is not true. Field data like this has changed the views of many people who were initially pessimistic about the preservation of Balinese culture [24]. Bali people certainly do not want to be conserved in a static sense, becoming a timeless society. The Balinese preserve their culture not in a static sense, because culture is basically a temporary product that is always in process. The Balinese are aware that they must adapt themselves to a changing world, while at the same time they are aware to maintain the continuity of their culture and identity [24].

4. Conclusion and Recommendation

Starting from the results of research and discussion that has been studied based on relevant research results can be concluded as follows.

1. The strategy of community empowerment through the implementation of Tri Hita Karana is socio-cultural-ergonomic oriented and its contribution to improve public health conditions and healthy living behavior as an effort to increase awareness of health, healthy living behaviors, and concern for the development of cultural tourism is carried out through Panca Gita training with participatory ergonomic approach.
2. Implementation of Tri Hita Karana socio-cultural ergonomic oriented in regular performance of Kecak dance can improve public health in terms of public awareness of their health conditions by 31.09%
3. Implementation of Tri Hita Karana with socio-cultural ergonomic orientation in regular Kecak dance performance can improve public health as seen from the clean and healthy behavior of the community by 27.39%
4. Implementation of Tri Hita Karana with socio-cultural ergonomic orientation in regular Kecak dance performances can increase public awareness of the development of cultural tourism by 21.65%

Based on these conclusions, the suggestions conveyed in this study are as follows.
1. It is recommended that the community continue to use the Socio-cultural Ergonomic-oriented Tri Hita Karana reference in improving health conditions and clean and healthy living behaviors and care for the development of cultural tourism.
2. It is recommended that community leaders always remind the public of the importance of clean and healthy living behaviors that can support the development of cultural tourism.
3. The related department should always facilitate efforts to improve public health conditions and clean and healthy living behaviors and care for the development of cultural tourism.

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