A comparative study of *ksheerpana, Padabhayanga* and both in *vata Pradhan prakriti* individuals with special reference to quality of sleep

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INTRODUCTION

In our modern society, wrong dietary habits, busy and stressful life style, people are not able to get good quantity and quality of sleep. *Nidra* plays an essential role in our health and wellbeing throughout our life. Getting enough good quality of sleep has many benefits including protecting our physical and mental health. The three pillars of life are aahar, *Nidra* and Brahmacharya and these three are well regulated factors of life. According to Acharya Vagbhata *Nidra* is caused by *Tama Guna* due to *Avarana* of *Kapha* and is *Nidra* is defined as the state of a person when its mind and all the *Indriya* (both *Karmendriya* and *Jnanendriya*) get exhausted and then dissociate themselves from their objects, then the individual is said to be slept. *Vata Pradhan Prakriti* individuals having the symptoms of Jagaruka (disturbed and alert sleep). Acharya's described so many *Ahara-Vihara* for improving quality of sleep. In which *Ksheerpana* is one of them. Those suffering from difficulty in sleep can use *Ksheerpana*. In Ayurveda, Acharya Sushruta described about *Padabhayanga* Application of oil to the sole is improve the quality of sleep.

AIM

To study the effect of *Ksheerpana*, *Padabhayanga* and both in quality of sleep of *Vata Pradhan Prakriti* individuals

OBJECTIVES

1. To Assess the Effect of *Ksheerapana* in Quality of Sleep of *Vata Pradhan Prakriti* individuals.
2. To Assess the Effect of *Padabhyanga* in Quality of Sleep of *Vata Pradhan Prakriti* individuals.
3. To Assess the Effect of *Ksheerapana* & *Padabhyanga* in Quality of Sleep of *Vata Pradhan Prakriti* individuals
4. To Compare the Effect of *Ksheerapana* , *Padabhyanga* and both in Quality of Sleep of *Vata*

Pradhan Prakriti individuals.

METHODOLOGY

1. It is the interventional and observational study in which 90 subjects were selected on the basis of inclusion and exclusion criteria.
2. Then they were randomly divided into three groups having 30 subjects each.
3. *Nidrajanan* property of Padabhyanga, *Ksheerapana* and both was assessed on BT, 15th day and AT with the help of 'PSQI Scale, in *Vata Pradhan Prakriti* individuals.

OBSERVATION

Observation and result were discussed in detail with logic. On theoretical study & feasible mode of action of *Ksheerpana* and *Padabhayanga* , detailed discussion was done in this section. Quality of sleep increase In Group A Improvement of *Nidrajanan* property of *Ksheerpana*. In Group B Improvement of *Nidrajanan* property of *Padabhayanga* . While in Group C is seen because of *Nidrajanan* property of *Ksheerpana* and *Padabhyanga* both.

RESULTS

All groups A, B, & C show significant result in improving quality of sleep in *vata Pradhana* Prakriti individuals. In between the group A and group B, group B showing more significant result as compare to group A. In between the group A and group C, group C showing more significant result as compare to group A. In between the group B and group C, group C showing more significant result as compare to group B. it's clear that *Padabhyanga* is found more beneficial when compared to *Ksheerapana*. Whereas *Ksheerapana* and *Padabhyanga* both i.e group c is showing more significant and more effective results in improving the quality of sleep in *vata Pradhana Prakriti* individuals.

DISCUSSION

On theoretical study & feasible mode of action of, detailed discussion was done. In this study *Ksheerpana* and *Padabhayanga* plays a very effective role in the management of quality of sleep *Vata Pradhan Prakriti Puruhsa*. The intervention of *Ksheerpana* and application of *Padabhayanga* is found very convenient and no adverse effects was noticed during the study period so we can say that *Nidrajanan* property of *Ksheerpana* is the safest and easiest treatment for improvement of quality of sleep in *Vata Pradhan Prakriti Puruhsa* . By use of *Ksheerpana* and *Padabhayanga* in sufficient dose, it increases the quality of sleep. The *Nidrajanan* property of *Ksheerpana* and *Padabhayanga* is very effective in the condition of improving the quality ofsleep in *Vata Pradhan Prakriti Puruhsa* .

CONCLUSION

The observation showed that there is significant effect of *Nidrajanan* property of *Ksheerpana* and *Padabhayanga* in *Vata Pradhan Prakriti Puruhsa* . The study shows that there is significant improvement of quality of sleep in *Vata Pradhan Prakriti* persons within 30 days.

Keywords: *Ksheerpana* , *Padabhayanga, Vata Pradhan Prakriti, Puruhsa, Nidrajanan,* quality of sleep, *Sukhoshna Ksheera, Tila Taila, PSQI Scale*

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INTRODUCTION

Maintenance of health is the prime objective and its management is a very complex problem. In our modern society, wrong dietary habits, busy and stressful life style, people are not able to get good quantity and quality of sleep. *Nidra* plays an essential role in our health and wellbeing throughout our life. Getting enough good quality of sleep has many benefits including protecting our physical and mental health. According to Acharyas:-

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The three pillars of life are aahar, *Nidra* and *Brahmacharya* and these three are well regulated factors of life[1]. Acharya Charka describes *Nidra* as *Adharaneeya Vega* and its deprivation produces ill effects on health[2].

- ❖ ´ÉÞ¹ÉiÉÉ KúÒ¤ÉiÉÉ YÉÉxÉ¨ÉYÉÉxÉÆ VÉÒÊ´ÉiÉÆ xÉ SÉ ** (A.H. Su. 7/53)

- *Sukha* (happiness) and *Dukha* (unhappiness), *Pushati* (nourishment) and *Karshya* (emaciation), *Bala* (strength) and *Abala* (debility), *Vrushta* (sexual power) and *Kleebata* (impotence), *Gyaana* (knowledge) and *Agyaana* (ignorance),*Jeevitam* (life) and it absence (death) All are effect of sleep[3].
- In Modern Sciences, Satisfactory and good quality of sleep are basic human needs[4].

Vata Pradhan Prakruti individuals having the symptoms of Jagaruka (disturbed and alert sleep)[5].

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- In Ayurveda, Acharya Sushruta described about *Padabhyanga*.

- Application of oil to the sole is improve the quality of sleep[6].
  - ❖ **ÊxÉpüÉEú®Éä** näü½ýºÉÖJÉõÉIÉÖ¹ªÉ: ¸É¨ÉºÉÖÊ”ÉxÉÖiÉÂ * {ÉÉnüi´ÉRÂû¨ÉÞnÖüEúÉ®Ò SÉ {ÉÉnüÉ¦ªÉfû: ºÉnüÉ Ê½ýiÉ: || (Sh.ch.24/70)
- Acharya's described so many *Ahara-Vihara* for improving quality of sleep,
  - ❖ **¶ÉÒ™üªÉäx¨ÉxnüÊxÉpüºiÉÖ IÉÒ®**¨Ét®ºÉÉxÉÂ nüÊvÉ* +¦ªÉfûÉäuüiÉÇxÉ×ÉÉxÉ¨ÉÚvÉÇEúhÉÉÇÊIÉiÉ{ÉÇhÉ¨ÉÂ || (A.H.su7/66)
- In which *Ksheerpana* is one of them .Those suffering from difficulty in sleep can use *Ksheerpana*.
- Thus study to compare effect of *Padabhyanga*, *Ksheerapana* and both in improve the quality of sleep.

RESEARCH QUESTION

- Does *Ksheerpana*, *Padabhyanga* and both in *Vata Pradhan Prakriti* individuals have beneficial effect on improving the quality of sleep?

HYPOTHESIS

NULL HYPOTHESIS:-

1. (H0A): *Ksheerapana* doesn't have beneficial effects on improving the quality of sleep in *Vata Pradhan Prakriti* individuals.
2. (H0B): *Padabhyanga* doesn't have beneficial effects on improving the quality of sleep in *Vata Pradhan Prakriti* individuals.
3. (H0C):*Ksheerpana*, *Padabhyanga* and both doesn't have beneficial effect on improving the quality of sleep in *Vata Pradhan Prakriti* individuals .

ALTERNATE HYPOTHESIS:-

1. (H1A): *Ksheerapana* has beneficial effects on improving the quality of sleep in *Vata Pradhan Prakriti* individuals.
2. (H1B): *Padabhyanga* has beneficial effects on improving the quality of sleep in *Vata Pradhan Prakriti* individuals.
3. (H1C): *Ksheerpana*, *Padabhyanga* and both have beneficial effect on improving the quality of sleep in *Vata Pradhan Prakriti* individuals.

AIM

To study the effect of *Ksheerpana*, *Padabhayanga* and both in quality of sleep of *Vata Pradhan Prakriti* individuals

OBJECTIVES

1. To Assess the Effect of *Ksheerapana* in Quality of Sleep of *Vata Pradhan Prakriti* individuals.

2. To Assess the Effect of *Padabhyanga* in Quality of Sleep of *Vata Pradhan Prakriti* individuals.
3. To Assess the Effect of *Ksheerapana* & *Padabhyanga* in Quality of Sleep of *Vata Pradhan Prakriti* individuals
4. To Compare the Effect of *Ksheerapana* , *Padabhyanga* and both in Quality of Sleep of *Vata Pradhan Prakriti* individuals.

MATERIALS

- ✓ 100 ml milk measuring cup.
- ✓ Cow milk.
- ✓ Tila Tail for Padabhyanga.

PLAN OF STUDY

1. Written Informed Consent was taken before starting the procedure
2. The Healthy volunteers were taken with the help of Health Assessment Questionnaires (Harvard School of Public Health Questionnaires).
3. The Healthy Volunteers was dividing randomly (simple random sampling) into three groups were (Group A -30 and Group B – 30 and Group C-30)
4. Apparently Healthy Volunteers with the help of PSQI (Pittsburgh Sleep Quality Index) Assessment Scale and Scoring was taken.
5. It is the interventional study in which 95 subjects were selected on the basis of inclusion and exclusion criteria. They were randomly divided into three groups. Group of A and B Group C 31-32-32.
6. Group (A), were advised to take 100ml *Sukhoshna Ksheera*, 2 hours after dinner and before go to bed, one month daily for 31 subjects.
7. In second group (B), were advised to *Sukhoshna Tila Taila* for local application 2-5 min each sole, 10 min. before go to sleep, one month for 32 subjects.
8. In third group (C) were advised to both 100ml *Sukhoshna ksheera*, 2 hours after dinner and before go to bed and *Tila Taila* 2-5 min each sole, 10 min. before go to sleep, one month for 32 subjects.

SOP For *Padabhyanga*

- Clean the sole with the lukewarm water
- Dry with clean towel
- Make oil lukewarm
- Apply the oil with the help of cotton swab

	GROUP-A (30)	GROUP-B (30)	GROUP-C (30)
Material	*Ksheerpana (sukhoshna goksheera*)	*Padabhyanga (sukhoshna til taila*)	*Ksheerpana(Goksheera) +Padabhyanga (Til taila)*
Procedue and time	100ml *sukhoshna ksheera,* 2hour after dinner and before go to bed.	2-5 min each sole, 10 min. before go to sleep (Ratrikala)	*Ksheerpana and Padabhyanga* accordingly Group A and group B
follow-up	1st follow-up 15th day 2nd follow-up 30th day	1st follow-up 15th day 2nd follow-up 30th day	1st follow-up 15th day 2nd follow-up 30th day
Study duration	01 month	01 month	01 month

CRITERIA FOR ASSESSMENT

OBJECTIVE PARAMETERS

1. Prakriti will be assessed by Prakriti Parikshan Patrak. (Dr. Kishor Patwardhan and dr. Rashmi Sharma. Modified by: Dr. Piyush Kumar Tripathi, Dr. Kishor Patwardhan and Dr. Girish Singh, Institute of Medical Sciences, Banaras Hindu University, Varanasi.)
2. PSQI Scale-The diagnosis of Quality of Sleep will be done as per PSQI Scale. (Buysse DJ et.al, The Pittsburgh sleep quality index: a new instrument for Psychiatric practice and research, Psychiatry research, 28,113-213.)
3. Sleep Diary (National Sleep Foundation Sleep Diary) will be taken for Quality of Sleep Pattern.

INCLUSION CRITERIA

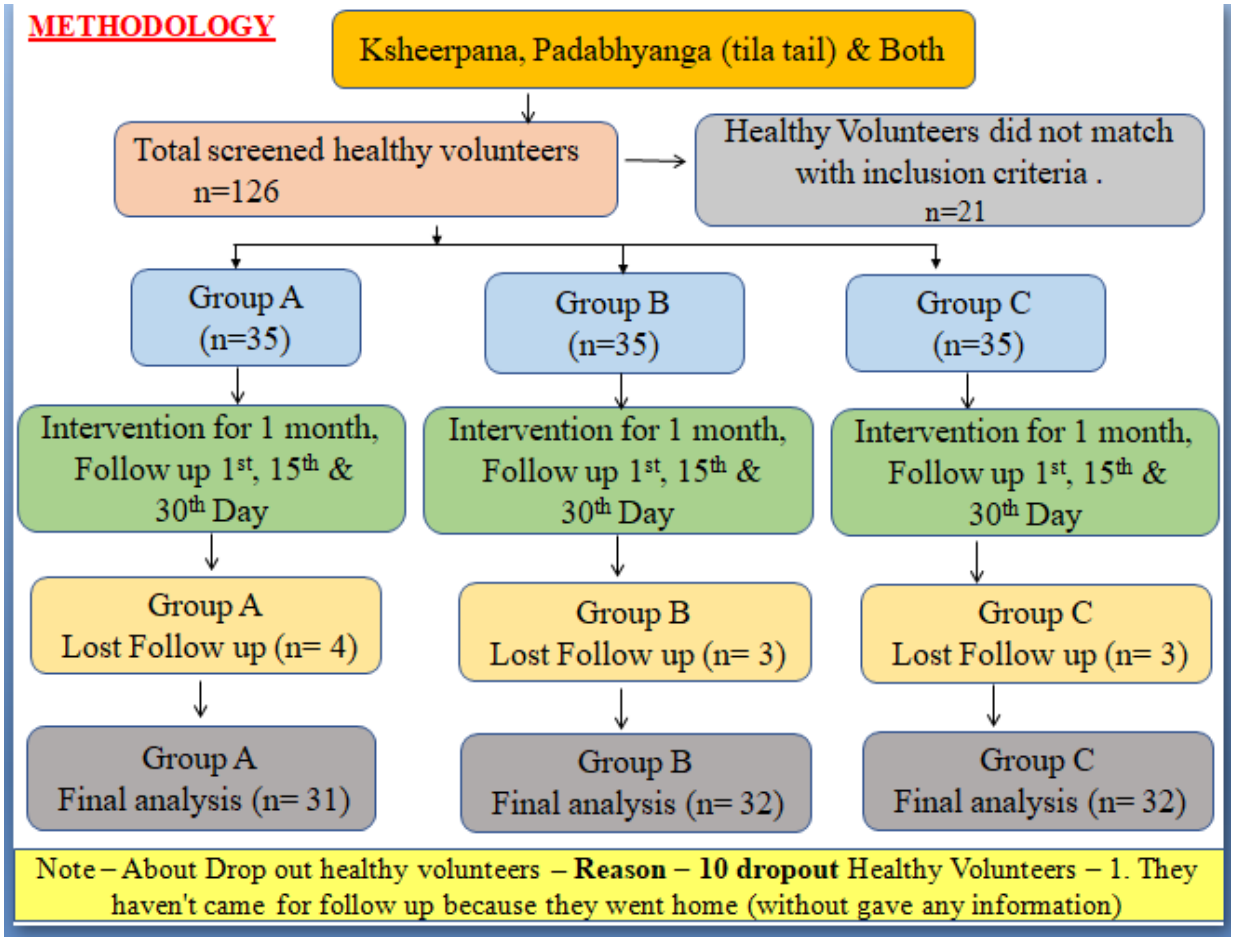
1. Apparently Healthy Volunteers of *Vata Pradhan Prakriti* person.
2. Age group of 18-30 years in PSQI scale range (6-14)
3. Either gender.

EXCLUSION CRITERIA

1. Person who are taking milk at night regularly since 1year.
2. Person who are allergic to milk and milk Products.
3. Person on Sedative and hypnotic medicine or other drugs known to cause drowsiness.

4. Person having systemic disorders.
5. Person having any kind of addictions.

METHODOLOGY



OBSERVATION

Observation and result were discussed in detail with logic. On theoretical study & feasible mode of action of *Ksheerpana* and *Padabhayanga* , detailed discussion was done in this section. Quality of sleep increase In Group A Improvement of *Nidrajanan* property of *Ksheerpana*. In Group B Improvement of *Nidrajanan* property of *Padabhayanga* . While in Group C is seen because of *Nidrajanan* property of *Ksheerpana* and *Padabhyanga* both.

RESULTS

- Group A; significant result seen in 31 subjects, quality of sleep was improved and changes seen in PSQI Scale.

- Group B; significant result seen in 32 subjects, quality of sleep was improved and changes seen in PSQI Scale.
- Group C; significant result seen in 32 subjects, quality of sleep was improved and changes seen in PSQI Scale.
- All groups A, B, & C show significant result in improving quality of sleep in *vata Pradhana Prakriti* individuals. In between the group A and group B, group B showing more significant result as compare to group A. In between the group A and group C, group C showing more significant result as compare to group A. In between the group B and group C, group C showing more significant result as compare to group B.
- So, it can be concluded that *Ksheerpana* and *Padabhyanga* is having significant result as showing the improvement the quality of sleep in *Vata Pradhana Prakriti* individuals. *Padabhyanga* is found more beneficial when compared to *Ksheerapana*. Whereas *Ksheerapana* and *Padabhyanga* both i.e group c is showing more significant and more effective results in improving the quality of sleep in *vata Pradhana Prakriti* individuals.

DISCUSSION

On theoretical study & feasible mode of action of, detailed discussion was done. In this study *Ksheerpana* and *Padabhayanga* plays a very effective role in the management of quality of sleep *Vata Pradhan Prakriti Puruhsa* . The intervention of *Ksheerpana* and application of *Padabhayanga* is found very convenient and no adverse effects was noticed during the study period so we can say that *Nidrajanan* property of *Ksheerpana* is the safest and easiest treatment for improvement of quality of sleep in *Vata Pradhan Prakriti Puruhsa* . By use of *Ksheerpana* and *Padabhayanga* in sufficient dose, it increases the quality of sleep. The *Nidrajanan* property of *Ksheerpana* and *Padabhayanga* is very effective in the condition of improving the quality of sleep in *Vata Pradhan Prakriti Puruhsa* .

Probable Mode of action of *Goksheera*

Due to nidana Vata & Pitta dosha ↑

Goksheera

(Predominance of Prthuvi & Jala mahabhoota)

Sthula, Sthira & Guru guna Drava, Sara, Manda, Sthira,Snigdha

Kapha dosha increase

Nidra *occur*

Probable Mode of action of *Padabhayanga*

Padabhayanga (Til-taila)

Snigdha, Mrudu, Picchil and Ropana in guna.

Act as a Vata shamak and *Kapha* vardhak.

Improve quality of sleep.

CONCLUSION

- Aim of present study was “A comparative study *ksheerpana, padabhayanga* and both in *vata pradhan prakriti* individuals with special reference to quality of sleep” based on the clinical statistical data we can state that p. value *Ksheerapana*, *Padabhyanga* and both *Ksheerapana* & *Padabhyanga* is 0.00.
- So, it can be concluded as Group A, Group B and Group C has shown beneficial effect in the improving the quality of sleep. The quality of sleep assessed by using Psql scale and by the useing of *Ksheerapana*, *Padabhyanga* and both *Ksheerapana* & *Padabhyanga* to improve the quality of sleep

- In a current research study subject of Group C which is of *Ksheerapana* and *Padabhyanga* both together have proved very effective result than the its individual Group A *Ksheerapana* and Group B *Padabhyanga* because of combine effect.
- According to objective criteria there is also an expressive improvement in the quality of sleep which is seen in Group C *Ksheerapana* and *Padabhyanga* as compare to Group A and Group B.
- The alternate hypothesis- *Ksheerpana*, *Padabhyanga* and both have beneficial effect on improving the quality of sleep in *Vata pradhan prakriti* individuals is accepted and the null hypothesis is rejected.

LIMITTIONS OF STUDY

- More no. of sample size can be taken for survey studies.
- study period was also limited
- Lack of interest of volunteers to agree to undergo intervention.
- Lack of interest of volunteers to agree to undergo for *Padabhyanga* Procedure.
- Limitations in personally giving milk to the subjects.
- Limitations in personally giving *tila taila* to the subjects.

FURTHER SCOPE OF THE STUDY

- Comparative study can be done on the basis of Improvement of quality of sleep in different age group.
- *Mahisha Ksheera* for quality of sleep in different *Prakriti* persons.
- *Goksheera* for quality of sleep in different *Prakriti* persons.
- *Padabhyanga* for quality of sleep in different *Prakriti* persons
- Comparative study can be done on the *Mahisha Ksheera* and *Goksheera* as a *Rasayana* for *Bala* enhancement.
- Comparative study can be done on the basis of *Nidrajanana* property of different *Ksheerapana* in different *Prakriti* for improvement of quality of sleep.
- Comparative study can be done on the basis of *Nidrajanana* property of different *Ksheera*.

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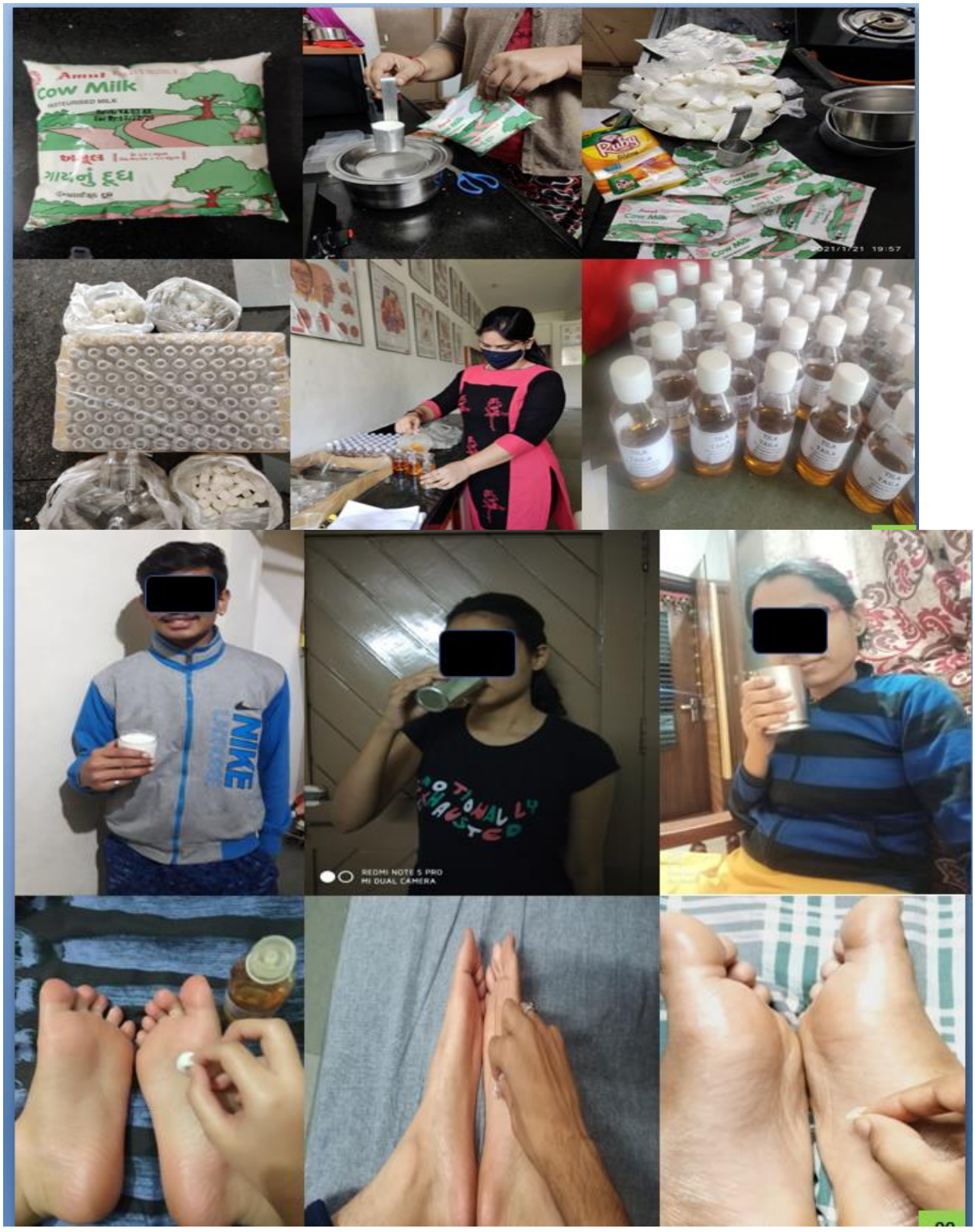
Amul
Cow Milk
NIKE
REDMI NOTE 5 PRO
MI DUAL CAMERA