GUIDE BOOK
AND INTERNATIONAL RULES

ISCONEX

30 JULY 2025

2025

BACKGROUND ISCONEX 2025

Health technology can save human lives, cure patients, improve the quality of human life, and many others. Therefore, the Faculty of Health Sciences, Muhammadiyah University of Purwokerto invites educators, practitioners, and students in the health sector to participate in *UMP International Health Sciences Student Competition Innovation & Exhibition* (UMP-ISCONEX 2025) with the theme *“Resilience through Tecnology: Shaping the Future of Healthcare ”.* as a forum for sharing in the field of health innovation and providing updates on developments in health, medicine, pharmacy, and other fields of medical science from various countries.

ISCONEX

OBJECTIVES

1. This activity aims to trigger innovation by students, lecturers, and health practitioners in the development of health sciences worldwide.
2. Facilitating participants to showcase their innovative works in the health sector both in Indonesia and other countries.
3. Facilitating participants to share and learn about developments in the world of health, especially in terms of health technology.
4. Facilitating oral presentation participants to disseminate their innovative works and compete with other participants from around the world in this event.

TIME SCHEDULE

Date	Activities
July 12th 2025	Abstract submission (deadline)
July 14th 2025	Notifications of acceptance (LoA)
July 30th 2025	Competition and Judgement time
July 30th 2025	Winner announcement

ISCONEX

CATEGORIES ISCONEX 2025

1. **DIGITAL-BASED INNOVATION**
   This theme has an output in the form of applications/software related to all kinds of health fields. Examples: Infusion liquid drip counter application, Hb counter application based on digital image analysis, heart rate counter application, etc.

2. **HEALTH PRODUCT-BASED INNOVATION**
   This theme has an output in the form of health products that are applied/used directly by patients. Examples; Infused pump-based IoT, Smart Phlebotomy chair, IoT-based Baby incubator, etc.

3. **HEALTH EDUCATION-BASED INNOVATION**
   This theme has an output in the form of products used for educational purposes. Examples: Phantom cardiopulmonary resuscitation, children's educational toys related to hand washing, dental and oral health educational toys, etc.

ISCONEX

COMPETITION STAGE

Fill in personal data and upload abstract on https://isconex.ump.ac.id

Administrative selection

Letter of Acceptance Notifications

Final exhibition & Judging session

ISCONEX

PARTICIPANT REQUIREMENTS UMP-ISCONEX 2025

1. One team consists of 2-5 active students (1 person as a mentor who can be a Lecturer/Practitioner)
2. Registration Fee: 750.000 rupiah / USD 75.00 / team. Get one free registration fee for every five applicants from the same institution
3. Facilities: Display Booth, Medal, Seminar Kit, International Certificate
4. For all foreign students who are currently studying in Indonesia, get a 25% discount IDR (Indonesian Rupiah) on the registration fee for your team
5. Notes: The Final Exhibition & Judging Session will be held at the Ukhuwah Islamiyah Auditorium, Universitas Muhammadiyah Purwokerto
6. For other provisions given after the participants register and get a Letter of Acceptance
7. Online participants are required to make a product presentation video
8. Online presentations can only be made by participants from outside Java island or international participants

AWARD

1st winner

Runner up

3rd Place

- All of the winners will receive medals, trophies, and cash prizes.
- The total prize money is tens of millions of rupiah
- All contestants will receive a certificate of international competition participation
- All abstracts will be published in an abstract book with an ISBN
- The selected article will be published in the Journal Medisains (a scientific journal accredited by the Ministry of Research-Technology and Higher Education Republic of Indonesia, Grade 2).

ISCONEX

ABSTRACT TEMPLATE

UMP - ISCONEX
UMP International Health Sciences Student Competition, Innovation and Exhibition

Digital Based Innovation

Web-based Self-mental Health Screening and Emotional Mental Problem Management in Incarcerated Juvenile

Prasetyo Aji Nugroho [1], Somporn Rungreangkulkij [1]

[1] *Psychiatric Nursing Department, Faculty of Nursing, Khon Kaen University, Thailand*

ABSTRACT

Background: In Indonesia, The Strength and Difficulties Questionnaire (SDQ) is a standard for emotional and mental problems screening in incarcerated. However, according to the Ministry of Law and Human Rights regarding the Standards of Health and Care Services Based on Information Technology, there is no information about mental health self-screening computerize-based. During incarceration, incarcerated adolescents have more significant emotional and mental problems than adolescents in the community. Therefore, the focus of developing mental health screening applications is juvenile incarceration, but not limited to adolescents in the community.

Purpose: The study aims to develop an application for the early detection of emotional and mental problems in juvenile offenders that can be monitored by staff, and the juveniles can manage their mental health status during incarceration.

Method: This study conducted the ADDIE model, namely, Analysis, Design, Development, Implementation, and Evaluation.

Results: An application called MyBehave, a web application-based using the computer, has been created, which has a feature of detecting emotional and mental problems and management of emotional and mental problems through mental health promotion while in incarceration. Users can carry out early detection independently, and the staff can monitor the development activities to improve mental health. The results of trials conducted on juvenile incarcerated found that this application system was more effective than the manual.

Conclusion: This application is helpful for health workers in incarceration in conducting early detection of emotional and mental problems and promoting mental health for juvenile incarcerated. This application was cost-effective (paperless), easy to access, can store vast amounts of database information, repeat over time, and does not need clinical training.

PICTURE

Figure 1. A Main Menu

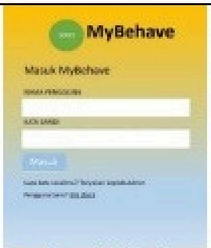

Figure 2. Login

Figure 3. First information

Figure 4. Identity

Figure 5. Instructions

Figure 6. Screening

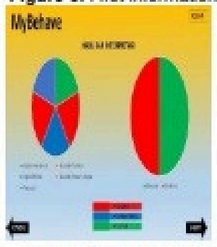

Figure 7. Results and Interpretation

Figure 8. Mental Health Promotion

UMP - ISCONEX
UMP International Health Sciences Student Competition, Innovation and Exhibition

Innovation in Clinical Practice

Innovation Relaxation Belts to Reduce Labor Pain Itensity and Increase β-endoprhine Levels

Candra Tyas Nur Fitria [1], Runjati, Sutopo Patriajati [2], Choiroel Anwar [2]

[1] *Master in Midwifery Program, Poltekkes Kemenkes Semarang, Jawa Tengah, Indonesia*
[2] *Faculty of Public Health, Universitas Diponegoro, Semarang, Jawa Tengah, Indonesia*

ABSTRACT

Background: Labor pain feels tremendous, and only 2-4% of mothers low pain during labor. Heat therapy is a non-pharmacological method. The heat therapy is still conventional, and this study uses a relaxation belt with more stable, dry heat media, and comfortable.

Objective: This study aims to develop and test a relaxation belt for efforts to reduce labor pain intensity and increase β-endorphin levels in the primigravida of the active labor phase.

Method: This study Research and Development (R&D). It consisted of 5 stages; stage I (literature study), stage II (product development), stage III (expert validity and phase I trials), stage IV (product revision and final product), and stage V (phase II trials).

Results: The relaxation belt has been created, it has been validity experts test and field trials. The result that the relaxation belt is more effective in reducing pain and increasing β-endorphin levels than warm water compress (mean different pain labor 2.40; p<0.01; effect size 1.72 and mean different increasing β-endorphin levels 53.34; p<0.01; effect size 2.42).

Conclusion: The relaxation belt is effective in reducing labor pain intensity and increasing β-endorphin levels.

PICTURE

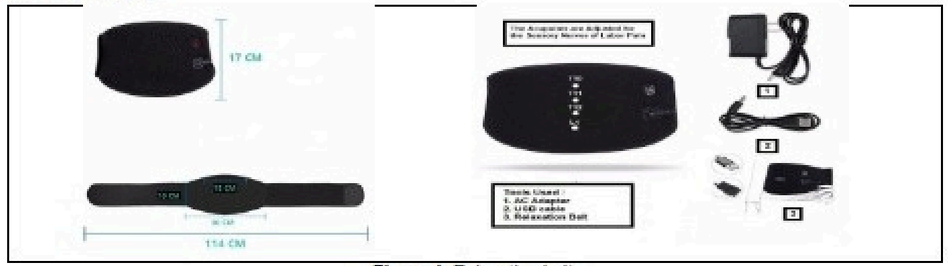

Figure 1. Relaxation belt

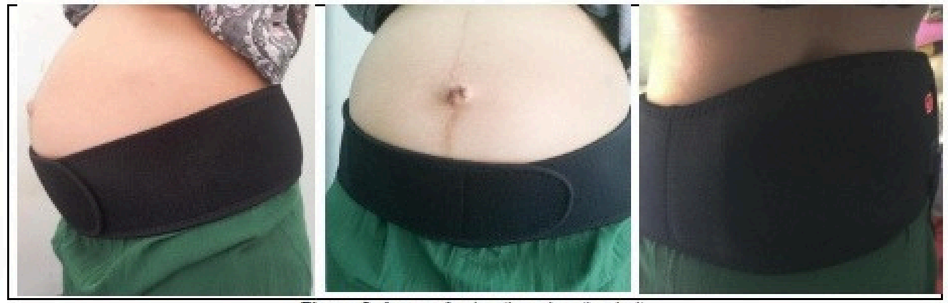

Figure 2. A way of using the relaxation belt

ABSTRACT TEMPLATE

UMP - ISCONEX

UMP International Health Sciences Student Competition, Innovation and Exhibition

Innovation in Clinical Practice

Design and Development of Electronic Stethoscope for Auscultation

Sahrul Munir [1], Endiyono [1]

[1] *Nursing Science Study Program, Faculty of Health Sciences, Universitas Muhammadiyah Purwokerto, Central Java Indonesia*

ABSTRACT

Background: Currently, several companies offer Bluetooth-based electronic stethoscopes. However, the stethoscopes are pretty overpriced. In this case, we need a stethoscope innovation with a more affordable price that carries the same function and improves ear sensitivity during auscultation of heart and lung sounds.

Technic: This stethoscope is equipped with a condenser mic that functions as a sound catcher on the stethoscope membrane. The analog data of the condenser mic is regulated by the potential of the pre-amp mic amplifier; then, analog data is forwarded using Bluetooth 5.0 A2DP BT600 USB Wireless Audio Transmitter and received by Bluetooth receiver using earphones.

Conclusion: A electronic stethoscope has been successfully developed, which can function adequately to detect, increase heart, lung, bowel sounds, and prenatal sounds.

PICTURE

Figure 1. Design of the Electronic Stethoscope

Figure 2. Application of the Electronic Stethoscope to the Patient

UMP - ISCONEX

UMP International Health Sciences Student Competition, Innovation and Exhibition

Innovation in Health Education

An Innovative Cardiopulmonary Resuscitation Mannequin for Common People

Runi Pramesti Putri [1], Endiyono [1]

[1] *Department Emergency Nursing, Universitas Muhammadiyah Purwokerto, Jawa Tengah, Indonesia*

ABSTRACT

Background: The success of basic life support is determined by the role of the individual(s) who first encountered a patient with a heart attack, and he will be a helper in the situation. Lack of socialization and training for laypeople makes them unable to implement a right first aid in cases of cardiac arrest. There is a need for innovations in cardiac, pulmonary resuscitation for ordinary people to facilitate them in practicing compression measures.

Technic: CPR mannequin is made of a plywood material in the shape of the human body; it is 34 cm long, 34 cm wide, and 6.5 cm high. There are 2 LED lights to detect the accuracy of the compression depth.

Conclusion: CPR mannequin can facilitate and improve the skills of laypeople in performing cardiopulmonary resuscitation

PICTURE

Figure 1. CPR mannequin

Figure 2. An easy way of using the mannequin

EVENT LOCATION

Syamsuhadi Irsyad lt. 10
Universitas Muhammadiyah Purwokerto
Jl. KH. Ahmad Dahlan, PO BOX 202 Purwokerto
53182 Kembaran Banyumas Telp. 0281-6844252,
6844253 Fax. 0281-637239

GET IN TOUCH

+62 858-7638-3419

isconex.ump.ac.id

isconex@ump.ac.id

@ump_isconex

ISCONEX