

SYNERGY OF PHYSICAL, MENTAL, FINANCIAL, AND ENVIRONMENTAL HEALTH IN SUPPORT OF SUSTAINABLE DEVELOPMENT GOALS (SDGS)

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Abstract:

The 2025 Community Service Program – Community Empowerment by Warmadewa University Students (KKN-PMM) in Belantih Village, Kintamani District, Bangli Regency, was held for one month with the theme "Synergy of Physical, Mental, Financial, and Environmental Health in Supporting the Sustainable Development Goals (SDGs)." Involving 25 students from various disciplines, this program was designed to address multidimensional problems identified through village situation analysis, including low mental health literacy, suboptimal waste management, limited diversification of locally based economic products (coffee and oranges), low financial literacy, and challenges in basic education (reading, writing, and arithmetic). Implementation methods included direct education, participatory training, ongoing mentoring, and cooperation activities. The program results showed a significant increase in community understanding of mental health, the application of the 3R principle (Reduce, Reuse, Recycle), innovative product processing skills (coffee cake and orange wine), the ability to manage household finances, and children's learning progress. This program directly contributes to the achievement of several SDGs, such as SDG 3 (Health and Well-Being), SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 13 (Addressing Climate Change). The program's success is supported by close collaboration between students, village officials, educational institutions, and the community. This article concludes that a holistic and locally based approach is key to successful community empowerment. It is recommended that the village government and universities continue their partnership to ensure the program's sustainability.

INTRODUCTION

Community Service Program (KKN) is a manifestation of the implementation of the Tri Dharma of Higher Education, particularly in the area of community service. This program is designed to bridge the academic world with social reality, enabling students to apply the knowledge, theory, and skills acquired in college to solve real-world problems in society. Furthermore, KKN serves as a social laboratory for students to hone soft skills such as leadership, communication, teamwork, and problem-solving. Warmadewa University, through the Directorate of Research and Community Service (DPPM), consistently organizes the KKN-Community Empowerment by Students (KKN-PMM) program. In the second period of 2025, 25 students from various faculties, including Medicine, Law, Management, Agriculture, and English Literature, were deployed to Belantih Village, Kintamani District, Bangli Regency, Bali.

Belantih Village was selected as the location for the KKN based on its potential and challenges. This village, with a population of 2,864, has a primary economic base in the agricultural



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sector, with superior commodities being Arabica coffee and horticultural crops, particularly oranges. However, this significant potential has not been fully utilized. Coffee products are generally sold only in ground form without diversification, resulting in relatively low economic added value for farmers (Kim et al., 2019). Socially, mental health issues remain taboo and are rarely discussed openly. Environmentally, burning and littering are still common due to a lack of understanding of 3R-based waste management and limited supporting facilities. Another significant challenge is low family financial literacy and difficulties in learning to read, write, and count (calistung) among elementary school-aged children (Sara et al., 2021).

Based on this situational analysis, the Warmadewa University Community Service Program (KKN-PMM) group designed a series of holistic and integrated work programs aligned with the Sustainable Development Goals (SDGs). These programs are not only curative (addressing existing problems) but also preventive and developmental (empowering local potential) (Maddox et al., 2020). This article aims to document, analyze, and publish the process, results, and impacts of the 2025 KKN-PMM implementation in Belantih Village, so that they can serve as reference material and lessons for the implementation of similar community service programs in the future.

METHODS

The implementation of the Community Service Program (KKN-PMM) in Belantih Village uses a participatory approach, where the community is not merely the target of the program but is also actively involved in planning, implementation, and evaluation. This methodology ensures that the program is truly tailored to local needs and contexts, and fosters a sense of ownership within the community, a key factor for program sustainability (Sara & Saputra, 2021).

Preparation and Situation Analysis. Before the program's implementation, students conducted field observations, in-depth interviews with village officials (the Village Head, Village Secretary, and other officials) (Laksmi et al., 2023), and discussions with community leaders and existing groups such as the Family Welfare Movement (PKK) and Farmers' Groups. This situational analysis aimed to map:

- a) Village Potential: Fertile coffee and citrus farming land, a strong culture of cooperation, and an active women's farming group.
- b) Main Problems: Limited diversification of processed products, low mental health and financial literacy, poor waste management, and difficulties in learning to read, write, and count among children.
- c) Priority Needs: Education, skills training, mentoring, and provision of supporting facilities.

Work Program Formulation. Based on the situation analysis, two categories of work programs were formulated:

1. Thematic Work Programs (Main): Core programs focused on empowerment in specific areas.
 - a) Basic Mental Health Education and Intervention.
 - b) "Belantih Cerdas Finansial": Basic Financial Literacy Education.
 - c) "BELANTIH BERSIH": Environmental Education Movement and Socialization of 3R Waste Sorting.
 - d) Women's Empowerment through Coffee Cake Making Training.
 - e) Extension on the Application of Ecoenzymes for Sustainable Agriculture.
 - f) Community Service Program (PKM) Assistance for Women Farmers' Groups in Orange Wine Processing.



2. Non-Thematic Work Programs and Supporting Activities: Supporting programs that strengthen the main program and build community engagement.
 - a) SAPA Belantih Class (Tutoring in Reading, Writing, Arithmetic and English).
 - b) Various community service activities (cleaning the post, village hall, temple, and public areas).
 - c) Participation in traditional events (Duwe Wadak Tradition).
 - d) Attending farmer group invitations.
 - e) Preparation and implementation of the 80th Indonesian Independence Day celebration.

Implementation Methods. Each program is implemented using methods tailored to its targets and objectives:

- a) Education and Extension: Interactive lectures, focus group discussions (FGDs), door-to-door visits, and the use of visual media (posters, leaflets, presentations). Conducted at schools (SDN 3 Belantih, SMPN 2 Kintamani) and the village hall.
- b) Skills Training: Demonstration and hands-on methods. Used in coffee cake making training and orange wine making mentoring.
- c) Mentoring: An intensive and sustainable approach, such as mentoring on orange wine fermentation and SAPA Class Belantih study guidance.
- d) Direct Action and Facilitation: Real-life activities such as environmental cleanups, waste sorting at the 3R Waste Management Site (TPS 3R), and the distribution of three-color-segregated trash cans.
- e) Cultural Participation: Participation in traditional events to build social relationships and respect local wisdom.

Monitoring and Evaluation. Evaluation is conducted periodically through:

- a) Pre-tests and Post-tests: To measure increased knowledge, for example, in mental health and financial literacy programs.
- b) Participatory Observation (Laksmi & Arjawa, 2023): Observing community enthusiasm, participation, and changes in behavior.
- c) Documentation: Each activity is documented in the form of photos, videos, and field notes.
- d) Reflection Discussion: Students conduct weekly reflections to evaluate achievements and challenges, and adjust strategies for the following week.

RESULTS AND DISCUSSION

The following are the results and analysis of the implementation of the main KKN-PMM programs in Belantih Village.

Education and Basic Mental Health Interventions for the Belantih Village Community.

Background: Mental health remains a taboo topic in the Belantih Village community. Low literacy can lead to stress, domestic conflict, and decreased productivity.

Implementation: The program was implemented at SMPN 2 Kintamani, targeting adolescent students vulnerable to psychological distress. The material included an introduction to mental health, identifying stress and anxiety, and simple emotional management techniques. **Results:**

- a) Student understanding of the importance of mental health increased. Students became more open to discussing their feelings.
- b) Teachers and the local community health center provided full support, demonstrating the institution's awareness of the importance of this issue. **Constraints:** Time and media limitations





prevented optimal delivery of the material, especially for sensitive topics requiring in-depth discussion. Discussion: The success of this program demonstrates that a simple and dialogical educational approach can break the ice in conversations about mental health in rural communities. It is important to develop follow-up programs that involve more stakeholders, including parents and healthcare professionals.

"Belantih Cerdas Finansial" Program (Basic Financial Literacy Education). Background: Many families, especially homemakers and MSME owners, are not yet accustomed to recording expenses and distinguishing between needs and wants.

Implementation: Education was conducted door-to-door to MSME owners and homemakers. The material covered simple household financial management, the importance of saving, and short-term financial planning.

- a) Participants understood the importance of financial record-keeping and began practicing it.
- b) Awareness arose to prioritize needs and reduce unnecessary expenses. Constraints: The program's reach was limited due to the short timeframe, so not all residents could be reached equally. Discussion: The door-to-door approach has proven effective in building rapport and providing more personalized consultations. For sustainability, the establishment of savings and loan groups or financial literacy communities facilitated by the village government is necessary.

"BELANTIH BERSIH" Program (Environmental Education Movement and 3R Waste Sorting Socialization). Background: Burning and littering are still widespread. Separated trash bins are very limited. Implementation: The program consists of:

1. Education at SDN 3 Belantih and SMPN 2 Kintamani about waste sorting and the dangers of littering.
2. Creation and installation of educational signs "Waste Decomposition" that provide visual information about the decomposition time of various types of waste.
3. Provision of separated trash bins (organic, inorganic, and hazardous waste) at strategic locations.

Results:

- a) Student and community awareness of the importance of waste sorting has increased significantly.
- b) The availability of trash bins has made it easier for residents to start practicing waste sorting. Obstacles: The Distribution of trash bins is not even across all hamlets. Discussion: The combination of education, visual media (signs), and provision of facilities constitutes a comprehensive strategy. A signboard for waste decomposition is a simple, effective innovation that raises community awareness. The program's sustainability depends on the village government's commitment to improving facilities and continuing outreach.

Women's Empowerment through Coffee Sponge Cake Making Training. Background: High-quality Belantih coffee is only sold as a raw material, resulting in low economic value. Implementation: Family Welfare Movement (PKK) women were trained directly to make steamed sponge cakes made from local coffee. Students also visited the Belantih Coffee Farm to understand the coffee supply chain. Results:

- a) The PKK women successfully produced steamed coffee sponge cakes with an acceptable taste.
- b) The idea emerged to develop this product into a home-based business and a typical village souvenir. Constraints: Limited equipment required production to be carried out in shifts. The



number of participants was slightly lower than expected. Discussion: This program successfully opened the community's eyes to the potential for coffee product diversification. Women's empowerment is key, as they are the ones who generally manage micro-enterprises in the culinary sector. In the future, further assistance is needed in terms of packaging, branding, and marketing.

Ecoenzyme Application Counseling and Mentoring for Women Farmers' Groups (Orange Wine). Background: Dependence on chemical fertilizers and unprocessed organic waste is a problem in the agricultural sector. Abundant oranges are only sold fresh.

Implementation:

- a) Ecoenzyme: Farmers and the community are taught how to make and utilize ecoenzymes (organic waste fermentation liquid) as a natural fertilizer and pesticide for coffee, citrus, and horticultural crops.
- b) Orange Wine: Women Farmers' Groups are assisted in the process of fermenting oranges into wine, from ingredient selection and fermentation to quality monitoring.

a) Results:

- b) The community understands the concept of sustainable agriculture and is interested in practicing ecoenzyme production.
- c) Women Farmers' Groups gain new knowledge about citrus processing and produce wine with high potential sales value. Challenges: The ecoenzyme and wine fermentation processes are time-consuming, so optimal results are not immediately visible. The scale of wine production is still limited by existing equipment. Discussion: These two programs demonstrate a commitment to the principles of a circular economy and added value. Ecoenzyme transforms waste into resources, while orange wine transforms primary products into premium processed products. This provides a strong foundation for developing sustainable agriculture and agro-industry in Belantih Village.

Belantih Class SAPA Program (Cali, Writing, and Arithmetic Tutoring and English).

Background: Many children at SDN 3 Belantih still struggle with reading, writing, and arithmetic.

Implementation: Students act as peer tutors using fun and interactive learning methods, using games and visual media. This is conducted weekly. Results:

- a) Children's basic reading, writing, and arithmetic skills show improvement.
- b) Children become more enthusiastic about learning, especially in English lessons, which are introduced in a fun way.
- c) Positive emotional bonds are established between students and students. Challenges: Children's varying levels of understanding make it difficult to deliver material in a classroom setting. Learning time is limited due to having to accommodate the school schedule.

Discussion: The SAPA program successfully creates a supportive learning environment outside of school hours. A personalized approach and creative methods are key to fostering children's interest in learning. Youth organizations or village volunteers can adopt this program for continuation.

Impact on Sustainable Development Goals (SDGs). The Warmadewa University Community Service Program (KKN-PM) in Belantih Village has made a significant contribution to the achievement of several Sustainable Development Goals (SDGs) (Sancaya & Saputra, 2024; Saputra & Jayawarsa, 2023):



- 1) SDG 3 (Healthy and Prosperous Life): Through mental health education and the environmental cleanliness movement ("Clean Belantih").
- 2) SDG 4 (Quality Education): Through the SAPA Kelas Belantih program and various non-formal education programs (financial and environmental literacy).
- 3) SDG 5 (Gender Equality): Through women's empowerment through coffee sponge cake training and mentoring of Women Farmers Groups.
- 4) SDG 8 (Decent Work and Economic Growth): Through the creation of new business opportunities from processed coffee and orange products.
- 5) SDG 12 (Responsible Consumption and Production): Through the socialization of the 3Rs, the production of ecoenzymes (recycling organic waste), and the processing of local products.
- 6) SDG 13 (Addressing Climate Change): The use of ecoenzymes and proper waste management can reduce methane emissions from organic waste.
- 7) SDG 17 (Partnerships to Achieve the Goals): All programs are implemented based on close partnerships between universities, village governments, schools, and communities.

CONCLUSION

The 2025 Community Service Program (KKN-PMM) by Warmadewa University Students in Belantih Village was successfully implemented and had a positive, multidimensional impact. The holistic approach integrating health, economic, environmental, and educational aspects has proven effective in addressing community needs. The programs implemented are not merely charitable but truly empower the community by optimizing existing local potential, such as coffee, oranges, and the spirit of cooperation. The partnerships built between students, village officials, and the community are key to the program's success and sustainability.

Based on the results and reflections during the KKN implementation, the following are recommendations for various parties:

1. For the Belantih Village Government:
 - a) Form working groups or communities to continue the program, such as the Environmental Awareness Group, the Coffee Cake and Orange Wine Business Group, and the Tutoring Group.
 - b) Allocate a budget for additional supporting facilities, such as segregated trash bins in all hamlets and production equipment for MSMEs.
 - c) Strengthen village regulations regarding waste management.
2. For Warmadewa University:
 - a) Follow up the program with applied research, for example, testing the effectiveness of ecoenzymes on Belantih coffee plants or developing marketing strategies for coffee cake and orange wine.
 - b) Create a sustainable community service program (follow-up) in Belantih Village, not limited to the KKN period.
 - c) Enrich student training with materials on cross-cultural communication, community project management, and program evaluation techniques.
3. For the Belantih Village Community:
 - a) Maintain a spirit of cooperation and continue to practice the knowledge and skills acquired.
 - b) Take the initiative to develop established businesses by continuing to innovate and maintaining product quality.
4. For Future KKN Students:



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- a) Conduct a more in-depth assessment before developing the program.
- b) Develop more systematic and organized documentation to facilitate monitoring, evaluation, and reporting.
- c) Establish more intensive communication with all elements of the community to ensure broad participation.

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