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- EPIDPP10/74**            **EFFECTIVENESS OF A THEORY-BASED HEALTH EDUCATION MODULE IN IMPROVING SELF-EFFICACY ON CONDOM USE AMONG PEOPLE LIVING WITH HIV**  
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- EPIDPP11/43**            **THE PREVALENCE OF NON-COMMUNICABLE DISEASE (NCD) RISK FACTORS AMONG COMMUNITY IN THE KOSPEN PROGRAMME IN MALAYSIA**  
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- EPIDPP12/67**            **ASSOCIATED FACTORS OF TEMPERATURE ON HAND, FOOT, AND MOUTH DISEASE (HFMD) INCIDENCE IN KUALA PILAH DISTRICT**  
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- EPIDPP13 / 70**            **MULTIMORBIDITY AND HOSPITALISATION: TRENDS OF UTILISATION AND THE ROLE OF SUPPLEMENTARY FINANCIAL HEALTH COVERAGE**  
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- EPIDPP16/65**            **YAWS AMONG INDIGENOUS PEOPLE OF SUNGAI KEJAR, HULU PERAK: THE PREVALENCE AND THE TREATMENT**  
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- EPIDPP19/86**            **THE CHARACTERISTICS OF ZONOTIC MALARIA PATIENTS IN KUALA PILAH DISTRICT, NEGERI SEMBILAN**  
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- EPIDPP20/90**            **BIRTH COHORT EFFECTS ON OBESITY AMONG MALAYSIAN ADULTS: THE GENERATION X-ERS AND Y-ERS ARE THE HIGH-RISK SUBPOPULATIONS**  
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- EPIDPP22/102**            **HUMAN BRUCELLOSIS: A RETROSPECTIVE STUDY IN TERENGGANU 2014 - MAY 2023**  
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- EPIDPP24/11**            **WOMEN ATTENDING CERVICAL CANCER SCREENING PROGRAMS BY THE PUBLIC HEALTH SECTOR; WHO ARE THEY?**  
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- EPIDPP25/101**            **SURVIVAL ANALYSIS OF NEWLY DIAGNOSED DIABETES MELLITUS : FINDINGS FROM THREE POPULATION-BASED SURVEYS.**  
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- EPIDPP26/119**            **BREAKING THE CHAIN OF COVID-19 INFECTION IN THE COMMUNITY RESIDING IN CENTRAL REGION OF MALAYSIA: THE ROLE OF ENHANCED MOVEMENT CONTROL ORDER (EMCO)**  
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- EPIDPP28/160**      **SPATIOTEMPORAL TREND OF HAND-FOOT-MOUTH DISEASE AND ITS RELATIONSHIP WITH ENVIRONMENTAL FACTORS IN NEGERI SEMBILAN**  
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- EPIDPP33/68**      **EPIDEMIOLOGICAL AND CLINICAL FEATURES OF CORONAVIRUS (COVID-19) PATIENTS IN THE SOUTHERN REGION OF MALAYSIA**  
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- EPIDPP34/97**      **READMISSION AND HOSPITAL DEATHS FOR CHRONIC OBSTRUCTIVE PULMONARY DISEASE AMONG THE ELDERLY: ANALYSIS OF HOSPITALISATIONS BETWEEN 2015-2019**  
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- EPIDPP36/165b**      **COLORECTAL CANCER AND STREPTOCOCCUS GALLOLYTICUS INFECTION: ACCURACY OF STATISTICAL AND MACHINE LEARNING MODELS FOR EARLY DETECTION ALGORITHM**  
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- EPIDPP41/143**      **SUPPLEMENTARY MEASLES IMMUNIZATION COVERAGE IN SEREMBAN, NEGERI SEMBILAN**  
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- EPIDPP43/36**      **HIV INFECTION IN BESUT, TERENGGANU: EPIDEMIOLOGIC TRANSITION, MORTALITY AND ASSOCIATED RISK FACTORS: A 17-YEAR REVIEW (2005-2022)**  
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- EPIDPP44/129**      **DIABETES MELLITUS IN KEDAH: FACTORS ASSOCIATED WITH GOOD GLYCAEMIC CONTROL**  
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- EPIDPP45/137**      **Submicroscopic Malaria Plasmodium Vivax Among Orang Asli Population In Pos LENJANG, LIPIS, PAHANG**  
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- EPIDPP46/144**      **ACCURACY OF REAL-TIME POLYMERASE CHAIN REACTION (RT-PCR) AS A SUPPLEMENTARY TEST FOR DIAGNOSING MEASLES**  
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- EPIDPP47/128**      **EFFECT OF DIGITAL MOBILE OF INFORMATION-MOTIVATION-BEHAVIOURAL SKILLS DENGUE INTERVENTION MODULE (IMODE) IN IMPROVING DENGUE PREVENTIVE PRACTICES AMONG MILITARY FAMILIES: CLUSTER RANDOMISED CONTROL TRIAL**  
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- FHSMPP10/124**      **EXPLORING THE USE OF MENSTRUAL CYCLE APPLICATIONS AMONG PHARMACY STUDENTS**  
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- FHSMPP13/105**      **PATIENT SATISFACTION WITH VIRTUAL CLINIC SERVICES IN MELAKA 2022-2023**  
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- FHSMPP14/110**      **MANAGEMENT OF SUSPECTED ACUTE CORONARY SYNDROME IN EMERGENCY DEPARTMENT OF A UNIVERSITY HOSPITAL**  
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- FHSMPP15/113**      **EHEALTH LITERACY OF PHARMACY STUDENTS AT A MALAYSIAN PUBLIC UNIVERSITY**  
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- FHSMPP16/123**      **MALAYSIA NATIONAL HEALTH ACCOUNTS (MNHA) OUT-OF-POCKET (OOP) HEALTH EXPENDITURE ESTIMATES USING INTEGRATIVE APPROACH**  
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- FHSMPP18 / 161**      **THE PREDICTORS OF OVERWEIGHT AND OBESITY AMONG UNIVERSITY STUDENTS IN SERDANG, MALAYSIA**  
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- FHSMPP19/138**      **CHALLENGES OF COMMUNITY PARTICIPATORY APPROACHES IN PUBLIC HEALTH RESEARCH TO UNCOVER THE GENDERED IMPACTS OF COVID-19 ON ESSENTIAL CARE WORKERS**  
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- FHSMPP20/164**      **THE EFFECTIVENESS OF IFitER PROGRAM AT WELLNESS HUB ALOR SETAR IN 2022**  
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- FHSMPP21/148**      **MATERNAL AND CHILD FACTORS AS DETERMINANTS FOR STUNTING AMONG UNDER FIVE CHILDREN IN KUANTAN, PAHANG**  
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- FHSMPP22/21**      **THE EFFECTIVENESS OF SEGAK-JomFitKedah TRIM & FIT (SJTF) PROGRAMME IN SIK DISTRICT, KEDAH: A PILOT INTERVENTION STUDY**  
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- FHSMPP23/84** HEALTH LITERACY AMONG LOCAL COMMUNITIES IN A PROTECTED AREA OF PAHANG NATIONAL PARK. BARRIERS AND STRATEGIES  
*Nor Aziah Abd Kadir, Amirah Azzeri, Mohd Iqbal Mohd Noor, Mohd Hafiz Jaafar, Ratha Krishnan Suppiah, Zurina Kefeli*
- FHSMPP24/91** THE LEVEL OF DIGITAL HEALTH LITERACY AND ITS ASSOCIATED FACTORS AMONG ELDERLY IN THREE VILLAGES AT JEMPOL, NEGERI SEMBILAN, 2023  
*Muhammad Azri Bin Mansor , Fatimah Binti Ahmad Fauzi, Muhammad Jufri Firdaus Bin Mahathir, Tharma Seellan A/L Muniandy, Kamilia Binti Zainal Maaruf, Farah Husna Binti Muliadi, Nurul Iman Sofea Binti Suhaimi, Iwana Izah Binti Mohd Deen, Khirthanaa A/P Suparmaniam, Shanna Lyn Carino, Ang Lin, Lai Yico*
- FHSMPP25/109** EXPLORING THE SOCIAL NETWORKS OF ELDERLY POPULATION IN KUCHING NORTH CITY: IMPLICATIONS FOR QUALITY OF LIFE  
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- FHSMPP26/157** CORRELATION OF DEPRESCRIBING WITH SPECIFIC-NECESSITY AND CONCERN, GENERAL OVERUSE AND HARM AND LEVEL OF MEDICATION ADHERENCE AMONG ELDERLY AT THE GERIATRIC CLINIC OF A PUBLIC HOSPITAL IN MALAYSIA  
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- FHSMPP27/75** EMERGENCY DEPARTMENT CONGESTION: FACTORS CONTRIBUTING TO CONGESTION AND SOLUTION TO RESOLVE THE SITUATION  
*Nor Asiah Muhamad, Nur Hasnah Ma'amor<sup>1</sup>, Fatin Norhasny Leman, 'Izzah 'Athirah Rosli, Nor Hidayah Jamalluddin, Tengku Puteri Nadiah Tengku Bahrudin Shah, Nurul Syazwani Misnan, Nik Athirah Farhana Nik Azhan, Chan Huan Keat, Muhammad Radzi Abu Hassan*
- FHSMPP28/75** IMMUNISATION OUTREACH PROGRAMME 2022 IN KEPONG HEALTH OFFICE  
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- FHSMPP29/135** HIGH ACCEPTABILITY AND UPTAKE IN A COVID-19 SELF-TESTING PILOT IN MANUFACTURING INDUSTRIES IN KEDAH, MALAYSIA  
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- FHSMPP30/140** EXPLORATORY FACTOR ANALYSIS OF A PATIENT-REPORTED OUTCOME MEASURE: A NEWLY DEVELOPED MEDICATION ADHERENCE MEASUREMENT TOOL FOR THE ELDERLY IN MALAYSIA  
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- FHSMPP31/151** MOBILE HEALTH SERVICES FOR THE FIRST PEOPLE IN PAHANG. CHALLENGES AND HOPES.  
*Zafrin Jamaludin, Raja Nurul Najwa Raja Ismail, Nazirah Jusoh, Mohd Hafeez Intiaz Hussein, Aznita Iryany Mohd Noor, Zulaiha Abdul Jalil, Azlan Abu Bakar, Roslina Che Cob, Mohd Nazri Awang, Suzana Mohd Hashim, Nor Azimi Yunus*

- FHSMPP32/163      **“IF ONLY I KNEW”: A CASE STUDY OF THE LIVED EXPERIENCE OF A PREGNANT TEENAGER**  
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- FHSMPP33/131      **A SYSTEMATIC REVIEW ON PATIENTS CLASSIFICATION SYSTEM (SPECIFIC TO DIAGNOSIS-RELATED GROUP) FOR HEALTH CARE SERVICES WORLDWIDE.**  
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- OHEHPP01/09      **UNDERSTANDING THE EPIDEMIOLOGY OF HEALTHCARE WORKERS INFECTED WITH TUBERCULOSIS (TB) DISEASE IN KEDAH: MULTIPLE CASE STUDIES FROM 2017 TO 2021.**  
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- OHEHPP02/39      **TECHNOSTRESS AMONG HEALTHCARE WORKERS (HCWS) AT THE STATE HOSPITALS IN KLANG VALLEY AND EAST MALAYSIA**  
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- OHEHPP03/30      **BURNOUT AND CORTISOL LEVELS AMONG LABORATORY PERSONNEL FROM SELECTED FACILITIES IN KLANG VALLEY DURING COVID-19 PANDEMIC**  
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*Ammar Amsyar Abdul Haddj, Esther Rishma Sundram, Shahdatul Dewi Nur Khairitza Taib, Muhammad Afdal Fitri Rahim, Qaiyum Omar, Zuraida Mohamed*
- OHEHPP14/142 GAMING ADDICTION AND ITS ASSOCIATION WITH DEPRESSION, ANXIETY AND LONELINESS AMONG UNIVERSITY STUDENTS IN MALAYSIA  
*Mona Lisa Md Rasip, Nor Asiah Muhamad, Sharifah Zawani Syed Ahmad Yunus, Norliza Chemi, Norni Abdullah, Nur Hasnah Maamor, Izzah Athirah Rosli2, Fatin Norhasny Leman, Mohd Fadzli Mohamad Isa*

rates in quitting smoking. Those with low DT could have relapsed to cope. Findings may lead credence to the impact of DT on the psychopathology of mood disorders among smokers (2). Causal relationship between DT and mood disorders cannot be inferred.

### Conclusion

DT level may be utilised to identify smokers' vulnerability to mood disorders comorbidity. 3-months and 6-months follow-ups are needed to determine significant association with DT to improve cessation outcomes.

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## EPIDOP07/55 : Depression And It's Associated Factors Among Bidayuh Women In The Rural Area Of Bau, Sarawak

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### Summary

Mental health is a fundamental component in everyone's life which is firmly associated with the improvement of an individual's carrier, social cohesion, and family connection. Therefore, a community-based study was conducted to determine the prevalence of depression and its associated factors among Bidayuh women in the Bau District. A cross-sectional study was conducted among 409 Bidayuh women in the Bau district using self-administered questionnaires. Center Epidemiologic Studies Depression Scale (CESD) was used as a tool to measure

depression among these women. Overall, the prevalence of depression among Bidayuh women in the Bau district is 5.4%. Based on the univariate analysis, there was a significant association among divorced women, young age group, no education or only primary education level, those who consume alcohol and those who are from other religions with depression. From the multiple linear regression, four elements were selected as the positive predictors notably age, marital status, education level, loneliness, and social support as a negative predictor for depression. This study was envisioned to be used as part of the evidence to assist Sarawak Government with the rural development plan under Malaysia's twelfth Plan from 2016-2030.

### **Keywords**

Depression, Bidayuh Women, Bau District, Associated Factor

### **Introduction.**

Mental health was included as a part of the United Nations Sustainable Development Goal (SDGs) in September 2015 (Votruba & Thornicroft, 2016). In the emerging global consensus on development priorities, health has been noticed as an essential component compared to other sustainable development goals (Eaton J et al., 2014). Depression is the most common mental health issue, and it is projected to be the leading cause of disease burden globally by 2030 (NHMS, 2019). Women from the rural region are the most vulnerable group to depression. The conceptual framework for this study was developed based on Socioecological Model (Kilonowski, 2017).

### **Materials and Method.**

A cross-sectional study was conducted among 409 Bidayuh women in the Bau district using self-administered questionnaires. The duration of the study October 2020 up to July 2021. The calculated sample size is 420 based on the prevalence of depression among rural women from the previous study in Malaysia (Din & Noor, 2010) with a precision (margin of error) of 5% between sample and population parameter and 95% confidence level. A cluster random sampling was used for the sampling procedure. Those Bidayuh women who stay in the rural area of Bau district and are able to understand Malay or English language were selected as respondents to the study. Those women who have any psychiatric disorders were pregnant or in their postnatal period were excluded from this study. The overall Cronbach alpha for the set of questionnaires was 0.873. This study used descriptive analysis, independent t-test, one-way ANOVA and Pearson Correlation as Univariate analysis to test for the association between variables. The multiple linear regression was used to predict the predictors of depression and control the confounding factors. This study was approved by Unimas Ethic Committee (FME/21/16).

### **Result**

Overall, the prevalence of depression among Bidayuh women in the Bau district is 5.4%. Based on the univariate analysis, there was a significant association among divorced women, young age group, no education or only primary education level, those who consume alcohol and those who are from other religions with

depression. Besides that, the univariate analysis suggests that a high level of loneliness has a positive effect on depression. Whereas, high level of social support, better-perceived neighbourhood, strong belief towards holistic health (HH) and use of complementary alternative medicine (CAM) showed a protective or negative effect on depression. The multiple linear regression predicted four elements as the positive predictors notably age, marital status, education level, loneliness, and social support as a negative predictor for depression.

Table 1: Association in between Loneliness, TCM and Neighbourhood Characteristics.

No	Variables	1	2	3	4	5
1	Loneliness	1				
2	Social Support	-.218**	1			
3	Holistic Belief and Complementary Medicine Use	-.176**	.370**	1		
4	Perceived Neighbourhood	-.189**	.458**	.423**	1	
5	Depression	.390**	-.346**	-.195**	-.258**	1

\* $p < 0.05$ , \*\* $p < 0.001$

### Conclusion

This study was envisioned to be used as part of the evidence to assist Sarawak Government with the rural development plan under Malaysia twelfth Plan from 2016-2030. The responsibility in managing depression among women does not lie with the individual but at every level in the organization. Policies should be a gender-informed approach that caters for the differential needs of women and men at each stage of their life.

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## **EPIDOP08/78 : Gamified-Real-Time Video Observed Therapy (GRVOTS) Mobile Application Impact On The Tuberculosis (TB) Medication Adherence And Motivation**

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### **Summary**

GRVOTS is a mobile application that incorporates real-time gamification elements to enhance medication adherence and motivation among TB patients. By connecting patients, supervisors, and TB administrators, this app, which is grounded in theory, represents a promising innovation for improving the efficiency of TB management systems including fast defaulter tracing.

### **Keywords**

VDOT; tuberculosis; medication adherence; mobile health app; gamification

### **Introduction**

Finding innovative methods to enhance Tuberculosis treatment adherence in Malaysia is imperative, given the rising trend of non-adhere TB patients. Thus, a novel approach that incorporates gamification and real-time components into Video Direct Observed Therapy (VDOTS) through mobile applications was developed with the aim is to increase motivation and sustainability use of VDOTS, as well overcome the limitations with physical Direct Observed Therapy (DOTS). The objective of this study is to determine the impact of Gamified Real-time Video Observed Therapy (GRVOTS) mobile apps on patient medication adherence rates and motivation.

### **Materials and Methods**

A two-month single-arm intervention was conducted between three users of patients, supervisors, and TB administrators via GRVOTS mobile apps. The Malaysian Medication Adherence Assessment Tool (MyMAAT), the Intrinsic Motivation Inventory (IMI) questionnaire and the number of VDOTS were collected

at baseline, 1-month, and 2-month intervals. The inferential statistic was analysed to determine the motivation and adherence level.

### Results and Discussion

This study involved 71 patients from 18 healthcare facilities who showed a significantly higher treatment adherence score of 90.87% with a mean difference from standard score by 10.87(95% CI: 7.29,14.46;  $p < 0.001$ ). The participants' MyMAAT and IMI scores significantly increased over 3-time intervals with the IMI Interest domain showing the highest mean difference by 19.76 (95% CI: 16.37, 21.152:  $p < 0.001$ ) whereas MyMAAT marks showed the lowest mean difference from T0 to T2 only increase by 5.38 (95% CI: 2.67, 8.10:  $p < 0.001$ ). With GRVOTS, a validated gamified mobile app (1), it was found that the increment of interest subdomain of the motivation questionnaire (IMI) was the highest. The interest component had the highest impact on IMI thus if apps can boost intrinsic motivation, the interest component has the greatest increase (2). Learners using mobile apps had significantly higher motivation scores compared to those using books (3). In our study on MyMAAT, we found that the GRVOTS mobile application improved medication adherence, which aligns with previous research indicating that using a mobile app for managing medication adherence can maintain optimal adherence rates over time (4). As for the trend of a constant small increment of MyMAAT score over time compared IMI, it may be due to habitual medication intake that is usually only created after 21 days or more according to individuals (5). Thus, more time might be needed to see the higher mean difference in MyMAAT results compared to our 2-months intervention study.

*Table 1: IMI (Interest) marks changes after the intervention of GRVOTS across the 3-time interval*

	Means (SD)	F-stat (df)	p-value	Partial eta square
<b>T0</b>	21.48(5.34)	194.26 (1,70)	<0.001	0.666
<b>T1</b>	27.48(8.63)			
<b>T2</b>	40.14(6.72)			

Repeated measure ANOVA (time-effect)

(Ho: There is no change of IMI (Interest) in 3 repeated measurements)

*Table 2: Post hoc comparison of IMI (Interest) marks for each pair of time level*

	Mean diff	(95% CI)	p-value
<b>T0 and T1</b>	5.75	2.635, 8.86	<0.001
<b>T1 and T2</b>	13.01	10.09, 15.94	<0.001
<b>T0 and T2</b>	19.76	16.37, 21.15	<0.001

*Adjustment for multiple comparisons using the Bonferroni procedure.*



**Table 3: Post hoc comparison of MyMAAT marks for each pair of time level**

	Mean diff	(95% CI)	p-value
<b>T0 and T1</b>	1.03	1.14, 3.20,	0.746
<b>T1 and T2</b>	4.35	1.78, 6.93	<0.001
<b>T0 and T2</b>	5.38	2.67, 8.10	<0.001

Adjustment for multiple comparisons using the Bonferroni procedure.

### Conclusion

By utilizing GRVOTS, a mobile application based on gamification and real-time features, we can enhance motivation and medication adherence among TB patients, while also addressing the limitations of physical DOTS.

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### **EPIDOP09/46 : Gender Differences Associated With Other Co-Morbidities Among Low-Income (B40) Individual With Hypertension In Malaysia: The RESPOND Study**

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