PSYCHOSOCIAL FACTORS OF MEDICATION ADHERENCE TO ADULT HIGH BLOOD PRESSURE IN ANTANANARIVO MADAGASCAR: SELF-DETERMINATION PERSPECTIVES

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Background

High Blood Pressure [HBP] remains a major risk factor for cardiovascular diseases [CVDs] (Gulati et al., 2025) and constitutes a public health problem both globally and in Madagascar (OMS, 2025; R. Rakoto Sedson et al., 2023). Through high prevalence, HBP generates substantial costs and severe consequences, particularly through damage to target organs (R. O. Rakoto Sedson et al., 2023). However, medication adherence, known as a multifactorial proce**ss**, remains problematic (Huart & Persu, 2022). Furthermore, access to healthcare, particularly due to a shortage of medication and high treatment costs, remains a major challenge in Madagascar (Afrobarometer, 2025). Despite the collectivist nature of Malagasy society, characterized by a duty of social solidarity known as “Fihavanana” (Rakotonirina, 2024), and despite the cultural aspiration to protect the fundamental social value of “Aina” (life), the reality is that access to healthcare services and national health expenditures remain limited and are given relatively low priority, accounting on average for 0.7% of the Gross Domestic Product (GDP) and 4% of the national budget (UNICEF Madagascar, 2023). Hence, the objective of this study is to examine the psychosocial factors of medication adherence to adult HBP within this context of economic precariousness in Antananarivo-Madagascar.

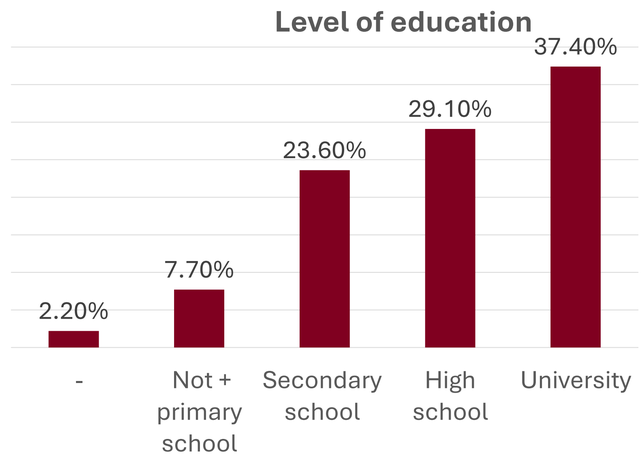
Methods

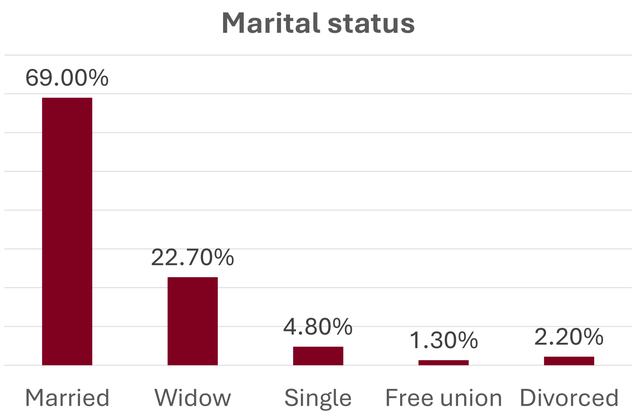
Using Self-Determination Theory, a cross-sectional correlational study was conducted among 313 patients diagnosed with hypertension who had been receiving antihypertensive treatment for at least six months in three health centers at Antananarivo from November 2024 to November 2025. After providing their free and informed consent, participants completed a sociodemographic questionnaire with measurement instruments translated and validated in the Malagasy language and culture using the cross-cultural validation method. The BPNSS in General was used to assess the level of satisfaction of the basic psychological needs (autonomy, competence, and relatedness); the GHQ-28 measured psychological distress (somatization, anxiety/insomnia, social dysfunction, depression) ; the TSRQ assessed motivation (autonomous motivation, controlled motivation, amotivation) ; and the HBP-MAS measured medication adherence.

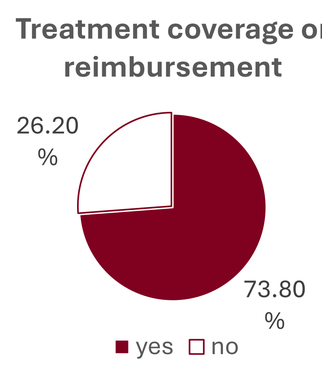
Measurement instrument	Cronbach’s alpha
GHQ in Malagasy	
Psychological distress (GHQ global)	0.851
Somatization	0.789
Anxiety/insomnia	0.789
Social dysfunction	0.742
Depression	0.704
TSRQ in Malagasy	
Motivation for treatment (TSRQ global)	0.703
Autonomous motivation	0.778
Controlled motivation	0.723
Amotivation	0.586
HBP-MAS in Malagasy	0.757
BPNSS-general in Malagasy	0.793

Results

Among the 313 participants, a predominance of Merina people was observed. The mean age was 62 years with a standard deviation of 11.47 and 64.5 % of respondents were women. Moreover, 90.1 % of these patients had at least a secondary level of education, 45.4 % are retired, 69 % were married, and 73.8 % benefited from treatment coverage or reimbursement.





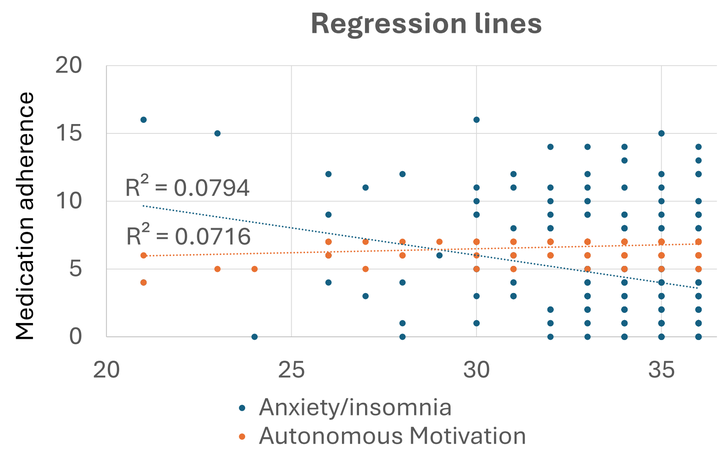


The cross-cultural validation demonstrated the reliability and validity of the instruments and revealed that, **within the Malagasy culture, physical and mental symptoms were inseparable.**

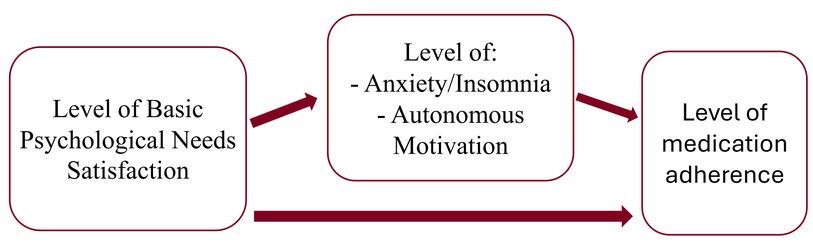
Findings revealed also that **social identity influenced motivation in the treatment and fulfilling social roles was perceived as an obligation regardless of one's state of health**.

From a structural perspective, the results demonstrated that **age** variance **(β = 0.057, p = 0.00)** and access to a **treatment reimbursement system** ***(F* (1,311) = 11.931, p = 0.001)** significantly determined medication adherence, explaining **9.9%** of its. This highlighted the direct influence of socio-economic and organizational factors on how patients correctly follow their treatment. Health equity was therefore concretely conditioned by unequal access to medical coverage.

Furthermore, **15.2%** of the variation in medication adherence was explained by psychological factors, particularly **autonomous motivation** and the **level of anxiety/insomnia** (*equation in the bottom of the results*).



These determinants acted as full mediators between the satisfaction of basic psychological needs (autonomy, competence, and relatedness) and adherence to antihypertensive medication (**Significant effect = 0.5209; *CI:* [0.247; 0.8625]**). This demonstrated the influence of the social and cultural environment on individuals’ psychological functioning and, consequently, on the adoption of health-related behaviors.



$$Score_{HBP} - MAS = 26.594 + (1.216\ x\ autonomous\ motivation) - (0.185\ x\ anxiety/insomnia)$$

Conclusion

These findings suggest that, within the Malagasy cultural context, achieving equality in healthcare remains challenging. Hence, **taking the cultural environment into account and addressing psychosocial and economic determinants - namely financial access, strengthening autonomous motivation, and preventing anxiety/insomnia -** within a context of economic precariousness and an asymptomatic illness requiring lifelong treatment, may contribute to greater health equity and the promotion of sustainable health behaviors among patients. **Thus, motivation-focused community approaches represent a promising avenue for future research within a collectivist society.**

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