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Psychological Distress, Moral Injury and Migration Intentions (Japa Syndrome) among Psychiatric Nurses in Enugu State, Nigeria: A Cross-Sectional Study

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Abstract

Background

Mental health service delivery faces a lot of challenges ranging from lack material resources to gross short of mental health professionals compounded by poor remunerations and lack of support to the few professionals in most developing countries.

Aim

To examine the relationship between psychological distress, moral injury and migration intention (Japa syndrome) among psychiatric nurses in Enugu, Nigeria, and to test whether distress and moral injury interact in relation to migration intention.

Design:

A descriptive cross-sectional survey guided by the Push–Pull Migration Theory, the Job Demand–Control Theory and the Moral Injury Theory.

Methods

The population comprised 350 registered psychiatric nurses at the Federal Neuro-Psychiatric Hospital, Enugu. The sample size was determined with the Taro Yamane formula (n = 187), increased by 10% for non-response (target = 206) and confirmed by a priori power analysis. Nurses were selected by proportionate stratified random sampling and completed an electronic questionnaire containing the Kessler Psychological Distress Scale (K10), the Moral Injury Symptom Scale–Healthcare Professionals (MISS-HP) and a Migration Intention Scale. Data were analysed with descriptive statistics, Pearson correlation and hierarchical multiple linear regression.

Results

Of 206 nurses approached, 198 returned usable questionnaires (96.1%). Psychological distress was high (mean K10 = 27.10; 80.8% in the High or Very High categories), as was moral injury (mean MISS-HP = 46.36; 71.2% at or above the threshold of 35) and migration intention (grand mean = 3.62 out of 5; 83.8% above the decision point of 3.0). Distress ($r = 0.45$, $p < 0.001$) and moral injury ($r = 0.48$, $p < 0.001$) were each positively related to migration intention. Together they explained 32.8% of its variance, and their interaction was significant ($B = 0.005$, $p = 0.042$): the association between distress and migration intention was stronger at higher levels of moral injury.

Conclusion

Psychological distress and moral injury are closely linked to the intention of psychiatric nurses to migrate and appear to reinforce each other as push factors. Retention strategies that address remuneration alone are unlikely to be sufficient.

Implications for the profession and/or patient care:

Nurse managers and policymakers should provide confidential mental health support, structured debriefing, ethics forums and adequate staffing for psychiatric nurses.

Introduction

The migration of health workers has become a defining feature of the Nigerian health system. Trained and experienced health workers are leaving in large numbers in search of better working conditions (Ajayi et al., 2025; Badru et al., 2024; Essien et al., 2024). Nigeria-trained nurses on the United Kingdom register rose by about 28%, from about 10,600 in March 2023 to 13,656 in March 2024 (Nursing and Midwifery Council [NMC], 2024), and although the number of new joiners has since declined, Nigeria remains one of the largest sources of internationally educated nurses (NMC, 2025, 2026). The loss is felt in a system that already has about 1.6 nurses and midwives per 1,000 population (World Bank, n.d.), far below the indicative threshold of 4.45 doctors, nurses and midwives per 1,000 population set by the World Health Organization ([WHO], 2016). The popular name for this exodus, “Japa,” captures a determination to seek opportunities abroad that economic explanations alone do not fully account for.

Mental health services bear a particular share of this burden. Mental health receives only about 3% of the federal health budget (King et al., 2026), there are about 250 psychiatrists for a population of over 200 million (Essien et al., 2024; Fadele et al., 2024), and an estimated 80% of Nigerians with serious mental health needs receive no treatment (Fadele et al., 2024). Psychiatric nurses work in this setting, caring for patients who may be aggressive or suicidal, often without adequate staff, drugs and facilities. Two experiences are especially relevant to their wish to leave. The first is psychological distress, the non-specific emotional suffering characterised by anxiety and depressive symptoms (Kessler et al., 2002). Nigerian nurses have high levels of distress and stress (Agbonselohbor et al., 2025; Ibigbami et al., 2022), and burnout has been linked to emigration intention (Ajayi et al., 2025; Badru et al., 2024). The second is moral injury, the deep psychological, spiritual and existential wound that follows perpetrating, witnessing or failing to prevent acts that transgress one’s moral beliefs, or being betrayed by them (Litz et al., 2009). In psychiatric settings, moral injury has been described among nurses who left the profession after taking part in coercive or neglectful care (Ohnishi et al., 2025).

Studies of nurse migration in Nigeria have concentrated on remuneration, career growth and the work environment, and they have mostly involved general nurses, mixed groups of health workers or students (Badru et al., 2024; Olatubi et al., 2024; Oyedokun et al., 2025). To the best of the authors’ knowledge, no

empirical study had examined psychological distress and moral injury together as predictors of migration intention among psychiatric nurses in Nigeria, or whether the two interact. This study therefore examined psychological distress, moral injury and migration intention among psychiatric nurses at a federal neuro-psychiatric hospital.

Three theories guided the study. The Push–Pull Migration Theory (Lee, 1966) holds that the decision to migrate depends on push factors in the place of origin and pull factors in the destination, mediated by individual circumstances, and that the intention to migrate precedes actual movement. The Job Demand–Control model (Karasek, 1979) proposes that high job demands combined with low control produce strain and distress. The Moral Injury Theory (Litz et al., 2009) explains how exposure to ethically challenging events, dissonance between actions and values and the internalisation of guilt, shame and anger lead to disengagement and loss of trust. In combination, the framework proposes that the strain of high job demands and the moral injury caused by ethically troubling practice are internal push factors that increase the desire to leave and that, as compounded push dynamics, they may strengthen each other.

The Study

3.1 Aims

The aims were to determine the level of psychological distress, the level of migration intention and the rate of moral injury among psychiatric nurses at the Federal Neuro-Psychiatric Hospital (FNPH), Enugu, and to assess the relationships of distress and of moral injury with migration intention. Two null hypotheses were tested: there is no significant relationship between psychological distress and migration intention (H_{01}), and there is no significant relationship between moral injury and migration intention (H_{02}). The combined and interaction effect of the two predictors was also examined.

3.2 Design, setting and population

A descriptive cross-sectional survey was conducted at FNPH, Enugu, a specialist tertiary mental health institution that provides inpatient, outpatient, rehabilitation and community mental health services to patients from the South-East geopolitical zone and beyond. The population comprised all 350 registered psychiatric nurses actively working in the hospital, as recorded in the nursing registry of the Nursing Department.

3.3 Sample size determination

The sample size was calculated with the Taro Yamane (1967) formula, $n = N / (1 + N(e)^2)$, where N = 350 and e = 0.05, which gave n = 186.67, rounded up to 187. To compensate for non-response and incomplete questionnaires, 10% (about 19 respondents) was added to give a target sample of 206. The adequacy of this sample for the inferential analyses was checked with an a priori power analysis (Cohen, 1988; Faul et al., 2009). Detecting a medium correlation (r = 0.30) at α = 0.05 with 80% power requires about 85 respondents, and detecting a medium effect ($f^2 = 0.15$) in a regression with three predictors

requires about 77. Because interaction effects need larger samples (Aiken & West, 1991), a more conservative benchmark of at least 118 respondents was adopted for the interaction term. The target sample of 206 exceeded all three minimums.

3.4 Sampling technique

Proportionate stratified random sampling was used. The nursing registry served as the sampling frame and was stratified by hospital unit (acute wards, rehabilitation/long-stay units, outpatient/clinic services and administration). Within each stratum, eligible nurses were assigned sequential numbers, and computer-generated random numbers were used to select participants in proportion to stratum size until the target of 206 was reached. This gave every registered nurse on the frame a known, equal and independent chance of selection and avoided the peer referral inherent in snowball sampling, which could allow supervisors or colleagues to infer who had been approached.

3.5 Measures

The questionnaire had four parts: sociodemographic items (age, gender, qualification, years of experience, rank, work unit and marital status) and three standardised instruments. Psychological distress was measured with the 10-item Kessler Psychological Distress Scale (K10; Kessler et al., 2002), rated from 1 (none of the time) to 5 (all of the time), with total scores of 10 to 50. Scores were categorised as Low (10–15), Moderate (16–21), High (22–29) and Very High (30–50), as in previous work with psychiatric nurses (Wang et al., 2022). Moral injury was measured with the 10-item Moral Injury Symptom Scale–Healthcare Professionals (MISS-HP; Mantri et al., 2020). Items were rated on an 11-point scale from 0 (not at all true) to 10 (completely true), giving total scores of 0 to 100, and a score of 35 or above was taken as the cut-off for elevated moral injury symptoms. Migration intention was measured with a 10-item Migration Intention Scale adapted from Ojo et al. (2023), rated on a five-point Likert scale from strongly disagree to strongly agree; a mean above 3.0 indicated migration intention. The K10 and MISS-HP are screening and severity measures and not diagnostic tools.

All three instruments were standard questionnaires that have been used in similar studies, including the K10 among psychiatric nurses in China (Wang et al., 2022) and health professionals in Uganda (Abaatyo et al., 2024), the MISS-HP among nurses (Liang et al., 2023; Singhal & Chukkali, 2023) and migration intention questionnaires among Nigerian nurses and students (Olatubi et al., 2024; Oyedokun et al., 2025). A panel of five experts (two psychiatric nursing specialists, a clinical psychologist, a research methodologist and a senior nurse educator) reviewed the questionnaire for appropriateness, clarity and cultural relevance, and five psychiatric nurses outside the sample checked its face validity. The instruments were pilot tested among 20 psychiatric nurses at the University of Nigeria Teaching Hospital, Enugu, for adaptability to the study area. In the main study, Cronbach's alpha was 0.86 for the K10, 0.93 for the MISS-HP and 0.88 for the Migration Intention Scale, all above the criterion of 0.70 (Nunnally, 1978).

3.6 Data collection

Data were collected with a self-administered electronic questionnaire on Google Forms. A secure link or QR code was given privately to each selected nurse by the researcher or an independent research assistant, not through supervisors, so that management could not tell who participated. The form opened with the participant information sheet and consent statement, and only nurses who consented proceeded. No names, staff identification numbers, email addresses or IP addresses were collected. Respondents could skip any item or exit at any point without penalty.

3.7 Data analysis

Data were analysed with SPSS version 27.0. The data were screened for outliers, normality and multicollinearity. Descriptive statistics (frequencies, percentages, means and standard deviations) addressed the levels of distress, moral injury and migration intention, and a one-sample t-test compared the migration intention grand mean with the midpoint of 3.0. Pearson product-moment correlation tested H_{01} and H_{02}. Hierarchical multiple linear regression examined the combined and interaction effects: mean-centred distress and moral injury were entered in Model 1 and their product term in Model 2, and simple slopes were computed at − 1 SD, the mean and + 1 SD of moral injury. A one-way ANOVA compared migration intention across experience groups as an exploratory analysis. Significance was set at $p < 0.05$.

3.8 Ethical considerations

The study was approved by the David Umahi Federal University of Health Sciences University Research Ethics Committee [insert approval reference and date] and **followed the Declaration of Helsinki for conducting research involving human beings.** Participation was voluntary, electronic informed consent was obtained, and participants were assured that taking part, declining or withdrawing would not affect their employment. Responses were anonymous and only aggregated findings are reported. A written distress and referral protocol gave participants access to the hospital's clinical psychology unit and a crisis line.

Results

4.1 Response rate and characteristics of the nurses

Of the 206 questionnaires distributed, 198 were complete and usable (response rate 96.1%); eight were excluded because one or more instruments were incomplete. The data were approximately normal (skewness between − 0.13 and 0.12) and multicollinearity was not a concern (variance inflation factors 1.01–1.18). Table 1 shows the characteristics of the respondents. The largest age group was 30–39 years (46.0%), most were female (63.1%) and married (57.1%), 44.9% held a bachelor's degree, 46.5% had 10–19 years of experience and 64.6% were in the junior cadre.

Table 1
Sociodemographic characteristics of the respondents (N = 198)

Characteristic	n	%
Age (years)		
20–29	25	12.6
30–39	91	46.0
40–49	62	31.3
50 and above	20	10.1
Gender		
Male	65	32.8
Female	125	63.1
Prefer not to say	8	4.0
Highest qualification		
Diploma/Nursing Certificate	88	44.4
Bachelor’s degree	89	44.9
Master’s degree	15	7.6
Others	6	3.0
Years of experience		
Less than 10	68	34.3
10–19	92	46.5
20 and above	38	19.2
Rank		
Junior cadre	128	64.6
Senior cadre	57	28.8
Prefer not to say	13	6.6
Work unit		
Acute psychiatric ward	74	37.4
Rehabilitation/long-stay unit	40	20.2
Outpatient/mental health clinics	58	29.3

Characteristic	n	%
Age (years)		
Administration/management	17	8.6
Prefer not to say	9	4.5
Marital status		
Single	58	29.3
Married	113	57.1
Divorced/separated	21	10.6
Widowed	6	3.0

4.2 Psychological distress, moral injury and migration intention

Psychological distress was high (Table 2). The mean K10 score was 27.10 (SD = 6.54; range 12–44), and 160 nurses (80.8%) scored in the High or Very High categories. The item with the highest mean was feeling worthless (M = 3.17). Moral injury was also high: the mean MISS-HP score was 46.36 (SD = 19.28; range 4–96) and 141 nurses (71.2%) scored at or above 35. The items with the highest means were difficulty forgiving oneself for patient-care decisions (M = 5.01) and questioning whether one is a good person because of the workplace (M = 4.92). The grand mean for migration intention was 3.62 (SD = 0.60), significantly above the midpoint of 3.0, $t(197) = 14.60$, $p < 0.001$, and 166 nurses (83.8%) scored above 3.0. The strongest item was a strong desire to leave Nigeria to nurse abroad (M = 4.00; 70.7% agreed or strongly agreed), and the lowest was likelihood of practising abroad within five years (M = 3.23).

Table 2
Psychological distress, moral injury and migration intention (N = 198)

Variable	n	%
K10 (mean = 27.10, SD = 6.54)		
Low (10–15)	10	5.1
Moderate (16–21)	28	14.1
High (22–29)	90	45.5
Very high (30–50)	70	35.4
MISS-HP (mean = 46.36, SD = 19.28)		
Mild (0–34)	57	28.8
Moderate (35–59)	90	45.5
High (60–100)	51	25.8
Migration intention (grand mean = 3.62, SD = 0.60)		
Low (≤ 2.50)	8	4.0
Below midpoint (2.51–3.00)	24	12.1
Moderate–high (3.01–3.50)	60	30.3
High (> 3.50)	106	53.5

K10 = Kessler Psychological Distress Scale; MISS-HP = Moral Injury Symptom Scale–Healthcare Professionals.

4.3 Relationships among the variables

Psychological distress was positively and moderately related to migration intention ($r = 0.45$, $p < 0.001$), and moral injury was positively related to migration intention ($r = 0.48$, $p < 0.001$); both null hypotheses were rejected (Table 3). Distress and moral injury were moderately correlated with each other ($r = 0.38$, $p < 0.001$).

Table 3
Pearson correlations among the study variables (N = 198)

Variable	1	2	3
1. Psychological distress (K10)	–	0.38**	0.45**
2. Moral injury (MISS-HP)	0.38**	–	0.48**
3. Migration intention	0.45**	0.48**	–
p < 0.01 (two-tailed).			

4.4 Combined and interaction effects

In the hierarchical regression (Table 4), distress and moral injury together explained 31.3% of the variance in migration intention (Model 1: $F(2, 195) = 44.42$, $p < 0.001$), and both made independent contributions. Adding the interaction term produced a small but significant increase in explained variance ($\Delta R^2 = 0.015$, $p = 0.042$; total $R^2 = 0.328$, adjusted $R^2 = 0.317$). The interaction was positive ($B = 0.005$, $p = 0.042$). Simple slope analysis showed that distress was positively related to migration intention at every level of moral injury, but the slope roughly doubled from 0.19 at low moral injury (− 1 SD; $p = 0.014$) to 0.29 at the mean and 0.40 at high moral injury (+ 1 SD; both $p < 0.001$).

Table 4
Hierarchical regression predicting migration intention (N = 198)

Predictor (Model 2)	B	SE	β	t	p
Constant	35.966	0.375	–	95.98	< 0.001
Psychological distress (centred)	0.291	0.059	0.317	4.96	< 0.001
Moral injury (centred)	0.113	0.020	0.363	5.70	< 0.001
Distress × moral injury	0.005	0.003	0.121	2.05	0.042

Model 1: $R^2 = 0.313$, adjusted $R^2 = 0.306$; Model 2: $R^2 = 0.328$, adjusted $R^2 = 0.317$, $\Delta R^2 = 0.015$. Dependent variable: migration intention total score (10–50).

4.5 Migration intention by years of experience

Mean migration intention was higher among nurses with less than 10 years of experience ($M = 3.66$, $SD = 0.57$) and 10–19 years ($M = 3.69$, $SD = 0.62$) than among those with 20 years or more ($M = 3.39$, $SD = 0.55$), $F(2, 195) = 3.61$, $p = 0.029$. This analysis was exploratory.

Discussion

This study examined psychological distress, moral injury and migration intention among psychiatric nurses in a federal neuro-psychiatric hospital. Distress, moral injury and migration intention were all high; distress and moral injury were each related to migration intention, and the two interacted.

Four in five nurses (80.8%) reported high or very high distress, which suggests that emotional suffering was widespread and may impair coping and functioning. This is consistent with the Job Demand–Control model (Karasek, 1979): understaffing, limited resources and high patient acuity, with little autonomy to change them, produce strain. It is similar to the 70.3% distress found among psychiatric nurses in China with the same instrument (Wang et al., 2022), and to evidence that Nigerian nurses are at higher risk of distress than doctors (Ibigbami et al., 2022) and report high stress (Agbonselohbor et al., 2025). Lower rates were reported by Ibigbami et al. (2022; about 55% moderate or severe distress) and Abaatyo et al. (2024; 59.5% in Uganda). The differences may reflect different instruments and cut-offs (the K6 and a K10 cut-off above 20 respectively), samples that mixed doctors and nurses or general health workers instead of psychiatric nurses only, and data collected during or after the COVID-19 pandemic.

Migration intention was also high (grand mean = 3.62; 83.8% above 3.0). The pattern, in which general desire and information-seeking exceeded formal steps such as submitting credentials, suggests a large pool of nurses in the contemplation phase, which is consistent with the view that intention precedes behaviour (Lee, 1966; Ojo et al., 2023) and offers a window for retention. The level is similar to those reported among Nigerian health workers (80.1%; Badru et al., 2024), nurses (95.2% and 89.3%; Ajayi et al., 2025; Olatubi et al., 2024) and specialist nurses in Ghana (mean = 3.43 out of 5; Poku et al., 2023). Lower levels were found among nurses in Iran (39.1%; Karimi et al., 2025), nursing students in Iran and Iraq (69.5% and 58.1%; Mehrabi et al., 2025) and Ghana (64.2%; Laari et al., 2024), and 49.3% of Ghanaian nurses intended to quit nursing (Opoku et al., 2022). These differences may arise because some studies used a single yes/no item instead of a scale, because students had not yet experienced the work environment, because the outcome was leaving the profession instead of the country, and because national economic conditions and exit routes differ. In Nigeria, the 2023 election period, fuel subsidy removal and naira depreciation have been linked to higher emigration intention (Badru et al., 2024).

Psychological distress was positively related to migration intention ($r = 0.45$), so nurses who were more distressed were more inclined to want to leave. Within the Push–Pull framework, distress is an internal push factor that makes an apparently more enabling environment abroad more attractive. The result is in line with findings that burnout is associated with emigration intention among Nigerian health workers and nurses (Ajayi et al., 2025; Badru et al., 2024) and with intention to quit among Ghanaian nurses (Opoku et al., 2022). Other studies found that psychological state was not the main driver: Wallner et al. (2026) reported that, once emotional withdrawal and job satisfaction were modelled, the direct effect of moral distress on intention to leave was not significant among Austrian nurses, and Oelhafen et al. (2026) found that workplace recognition was the factor consistently associated with distress, burnout and intention to quit in Switzerland. Such studies modelled job satisfaction and recognition alongside distress, which may have absorbed part of its effect, and nurses in those settings can leave an employer without leaving the country.

Moral injury symptoms were common: 71.2% of the nurses scored at or above 35. The prominence of items about self-forgiveness, moral worth and shame, alongside institutional betrayal, fits the definition of moral injury as a wound arising from transgressing deeply held moral beliefs (Litz et al., 2009) and suggests that, in this setting, it is rooted in structural constraints that prevent nurses from delivering the care they are trained to give. A comparable mean MISS-HP score (48.96) was reported among palliative care nurses in China (Xu et al., 2026), and moderate-to-high moral distress was found in 68.2% of intensive care nurses in Latvia (Cerela-Boltunova et al., 2025). Lower rates were reported among Iranian nurses (47%; Liang et al., 2023) and student nurses in South Africa (about a third; Mbazo et al., 2025). Those samples were general ward nurses during the COVID-19 pandemic and students with limited clinical responsibility, cut-offs differ across studies (35 here, 36 in the original scale and 50 in Xu et al., 2026), and psychiatric nurses are routinely involved in restraint and seclusion in resource-poor settings (Ohnishi et al., 2025).

Moral injury was positively related to migration intention ($r = 0.48$) and was the slightly stronger predictor in the regression model. Nurses who internalise guilt, shame and anger and feel betrayed by the institution lose trust in it, and migration becomes a means of seeking an environment in which they can practise in line with their values. This suggests that Japa among psychiatric nurses is not purely a search for higher pay. The result supports earlier work linking moral injury and moral distress with professional disengagement and intention to leave (Cerela-Boltunova et al., 2025; Ohnishi et al., 2025; Soriano et al., 2026; Weissinger et al., 2024) and adds evidence from Nigeria that the relationship extends to the intention to leave the country. In contrast, Wallner et al. (2026) found no significant direct effect of moral distress on intention to leave, and Cerela-Boltunova et al. (2025) found that the link operated partly through burnout. Those studies measured moral distress, which is conceptually distinct from the more lasting moral injury (VanderWeele et al., 2025), moral distress was low in the Austrian sample, and the outcome was intention to leave a post. Burnout was not measured here, so part of the association may be carried by burnout.

The interaction between distress and moral injury was significant, though small ($\Delta R^2 = 0.015$): the slope of distress on migration intention roughly doubled from low to high moral injury. The two experiences therefore appear to reinforce each other as compounded push factors, supporting the concern that the conditions driving nurses out can form a self-reinforcing loop. No earlier study has tested this interaction. The finding is consistent with the sequential pathway of moral distress to burnout to turnover intention reported by Cerela-Boltunova et al. (2025) and with conservation-of-resources reasoning (Ajayi et al., 2025), although mediation and moderation address different questions. About 67% of the variance in migration intention lay outside the model, as expected given the economic, family and pull factors involved (Badru et al., 2024; Lee, 1966). Finally, intention was lower among nurses with 20 years of experience or more, as in Badru et al. (2024), who found that longer practice was associated with lower emigration intention, possibly because senior nurses have stronger financial and social ties and early- and mid-career nurses have more to gain abroad. No verified study contradicted this pattern.

5.1 Limitations

The cross-sectional design captured data at one point in time, so the relationships reported are associations and not causal effects. The K10 and MISS-HP are screening and severity measures and cannot be used to diagnose any mental disorder or moral injury disorder. This study focused on mental health nurses hence the findings cannot be applied to other nurses.

Conclusion

Psychiatric nurses at the Federal Neuro-Psychiatric Hospital, Enugu, experienced high levels of psychological distress, carried a substantial burden of moral injury symptoms and had a strong intention to migrate. Both distress and moral injury were significantly associated with migration intention, and the two reinforced each other. The Japa phenomenon among psychiatric nurses therefore cannot be explained by economic and career considerations alone, and retention strategies that address only remuneration are likely to be incomplete.

Hospital management should establish a confidential staff mental health service with self-referral that supervisors cannot see, create regular ethics rounds and debriefing sessions after critical incidents, review staffing and the availability of essential drugs and consumables, and strengthen channels for raising ethical concerns without fear of reprisal. The Federal Ministry of Health and the Nursing and Midwifery Council of Nigeria should adopt retention policies that incorporate psychological and moral factors alongside pay. Future research should use longitudinal and multi-site designs, include burnout, job satisfaction and economic pull factors, and evaluate interventions to reduce distress and moral injury.

Declarations

Author contributions: O.P N: conception and design, data collection, data analysis and drafting of the manuscript. SN conception, design, supervision, critical review and approval of the final manuscript. Both authors approved the final version.

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Ethics statement: Ethical approval was granted by the David Umahi Federal University of Health Sciences University Research Ethics Committee [insert reference number and date]. Electronic informed consent was obtained from all participants. **The study was conducted in accordance with Helsinki declaration for conducting research studies involving human beings**

Data availability: The data that support the findings of this study are available from the corresponding author on reasonable request.

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