

*Perspective***Transcultural Psychiatry and Neuroimaging:
A 2 × 2 Factorial Framework for Culturally
Anchored Study Designs****Thomas Stompe**Department of Psychiatry and Psychotherapy, Medical University of Vienna,
1090 Vienna, Austria; thomas.stompe@meduniwien.ac.at.**ABSTRACT**

Psychiatric neuroimaging seeks to identify neural mechanisms of mental disorders and frequently interprets its findings as biologically grounded and potentially universal. However, transcultural psychiatry has consistently shown that symptom expression, illness meaning, and clinical course vary systematically across cultural contexts. At the same time, cultural neuroscience demonstrates that neural organization itself—particularly in domains such as self-related processing and emotion regulation—can be modulated by culturally structured experience. These insights challenge a central but often implicit assumption of psychiatric neuroimaging: that neural baselines are culturally neutral. Most cross-national imaging studies either rely on case-control comparisons within a single setting or compare patient groups across countries without locally anchored control groups. In such designs, culturally patterned baseline variation cannot be distinguished from disorder-specific neural alterations. This review integrates empirical findings from transcultural psychiatry and cultural neuroscience and argues that the key limitation of current cross-cultural neuroimaging lies in study architecture rather than analytic sophistication. We argue that a 2 × 2 factorial design, with patient and healthy control groups recruited within each sociocultural setting, provides a minimal framework for estimating disorder effects, contextual baseline effects, and context × disorder interactions without assuming that the grouping factor itself constitutes a complete measure of culture. By making cultural baselines empirically explicit, psychiatric neuroimaging can move from implicit universalism toward methodologically grounded global validity.

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INTRODUCTION: TRANSCULTURAL PSYCHIATRY AND NEUROIMAGING

Psychiatric neuroimaging aims to identify neural mechanisms of mental disorders and increasingly frames its findings as biologically grounded and potentially universal. Functional and structural imaging

studies describe network alterations, circuit dysfunctions, and candidate biomarkers that are often interpreted as disorder-specific signatures. Implicit in this ambition is a crucial methodological assumption: that the neural baseline against which pathology is defined is sufficiently stable and comparable across populations.

Transcultural psychiatry questions precisely this assumption. For several decades, it has demonstrated that the expression, interpretation, and course of mental disorders are shaped by cultural frameworks. Symptoms are not merely biological outputs but are embedded in systems of meaning, explanatory models, and social practices [1,2]. Idioms of distress illustrate how psychological suffering can be communicated through culturally legitimate symptom languages that differ markedly across societies [2]. Even core diagnostic entities such as depression or psychosis are filtered through culturally specific models of selfhood, morality, and relational structure [1,3].

These insights generate a conceptual tension. If symptom expression and self-experience are culturally mediated, and if diagnostic categories are historically and socially situated constructs, then the neural systems supporting these experiences may not be culturally neutral either. Neuroimaging, however, frequently operates as if resting-state activity, functional connectivity, or structural metrics represented universal reference points. The assumption of a neutral baseline is rarely made explicit but is foundational for interpreting deviations as pathological.

The problem becomes especially visible in cross-national comparisons. When patient groups from different countries or sociocultural settings are compared, observed neural differences may be interpreted in terms of disorder heterogeneity, biological variation, treatment exposure, or methodological factors. However, without locally recruited healthy comparison groups, it remains difficult to determine the extent to which such differences reflect disorder-related processes, culturally patterned baseline variation, or interactions between the two. Cross-cultural work in social cognition and psychopathology has increasingly emphasized precisely this problem of separating neural mechanisms associated with illness from those associated with culturally structured experience. The issue is not one of statistical sophistication but of epistemological design [4].

The central aim of this review is therefore methodological: to examine how the insights of transcultural psychiatry can inform the design and interpretation of psychiatric neuroimaging studies. We argue that without explicit consideration of contextual baselines, neuroimaging risks conflating sociocultural variation and pathology. To address this, we will first outline the conceptual foundations of transcultural psychiatry, then examine baseline assumptions in neuroimaging research, and finally consider a 2×2 factorial design as a minimal architecture for culturally anchored psychiatric neuroimaging.

TRANSCULTURAL PSYCHIATRY: EMPIRICAL FOUNDATIONS

Transcultural psychiatry is not a theoretical addendum to clinical psychiatry but an empirically grounded field that has demonstrated systematic variation in the presentation, interpretation, and outcome of mental disorders across cultural contexts. Its core contribution lies in showing that diagnostic categories are not merely translated across societies but transformed in meaning and expression.

One of the most robust findings concerns variation in symptom expression. In depressive disorders, numerous studies have shown that patients in East Asian and other non-Western contexts frequently emphasize somatic symptoms such as fatigue, pain, or sleep disturbance rather than subjective sadness or guilt [5,6]. This pattern does not indicate absence of affective disturbance but reflects culturally legitimate modes of communicating distress. The phenomenon has been repeatedly documented in clinical and community samples and challenges the assumption that Western symptom hierarchies are universally primary [5].

Similarly, research on psychosis demonstrates that while hallucinations and delusions occur cross-culturally, their content, emotional tone, and social integration vary significantly. Comparative studies have reported differences in the phenomenology of auditory hallucinations, including variations in the perceived agency, moral valence, and relational quality of voices [7]. These findings indicate that psychotic experiences are embedded in culturally structured models of selfhood and social order rather than representing invariant neurobiological outputs.

Importantly, experiences that might be classified as hallucinations or delusion-like phenomena within Western psychiatric frameworks are not necessarily regarded as pathological in all cultural contexts. Experiences involving communication with spirits, ancestors, or other supernatural agents may form part of culturally sanctioned religious, spiritual, or mediumistic practices and can be experienced as meaningful or positively valued. Their clinical significance therefore depends not only on phenomenological form, but also on cultural congruence, associated distress, functional impairment, and the social meaning attributed to the experience [8,9].

Trauma-related disorders further illustrate this variability. Although core features such as re-experiencing and hyperarousal are widely observed, systematic reviews have documented differences in avoidance patterns, somatic expressions, and culturally specific trauma syndromes [10]. The diagnostic construct of post-traumatic stress disorder thus captures a spectrum of stress responses that are modulated by cultural context.

Beyond symptom expression, transcultural psychiatry has provided influential evidence regarding illness course and outcome. The World Health Organization's International Pilot Study of Schizophrenia and the Determinants of Outcome of Severe Mental Disorders study found that patients with schizophrenia in low- and middle-income countries often had more favorable long-term outcomes than those in high-income settings [11,12]. These findings challenged assumptions about the uniformly deteriorating course of schizophrenia and highlighted the role of family structure, social integration, and cultural expectations in shaping illness trajectory.

Taken together, these empirical findings establish two critical points. First, psychiatric syndromes are not phenomenologically uniform across cultures. Second, illness course and prognosis are influenced by sociocultural context. These insights do not negate biological contributions to mental disorder, but they constrain the interpretation of biological findings. If symptoms, meanings, and trajectories vary systematically, then any attempt to identify neural correlates of psychiatric disorders must account for the cultural conditions under which those correlates are measured.

Neuroimaging and the Assumption of Neutral Baselines

Psychiatric neuroimaging operates within a conceptual framework that presupposes the existence of measurable deviations from a normative neural baseline. Structural alterations, differences in functional connectivity, or task-related activation patterns are typically interpreted relative to healthy control groups recruited within the same study context. When findings replicate across samples, they are frequently discussed as disorder-specific neural signatures.

However, the assumption that neural baselines are culturally neutral has rarely been examined explicitly. Most neuroimaging research has been conducted in Western, educated, industrialized, rich, and democratic populations [13]. The demographic concentration of samples has implications that extend beyond representativeness: it shapes the implicit definition of what counts as "normal" brain organization. Large-scale meta-analyses and consortia studies in disorders such as schizophrenia and major depressive disorder have identified relatively consistent patterns of structural and functional alterations, including subcortical volume changes, cortical abnormalities, and dysconnectivity within large-scale networks [14,15]. These findings are often interpreted as evidence for shared neurobiological substrates of psychiatric disorders. Yet the overwhelming majority of contributing samples originate from high-income countries, and sociocultural context is rarely modeled as an analytic variable. A related assumption concerns resting-state activity. Resting-state functional connectivity is frequently treated as a neutral reference point, reflecting intrinsic brain organization independent of cultural influences. However, theoretical and empirical work has

emphasized that intrinsic activity is not a static background but is dynamically shaped by experience and environmental exposure [16,17]. If intrinsic brain organization is experience-dependent, and if experience is culturally structured, then resting-state baselines may differ systematically across sociocultural settings.

The interpretive challenge becomes particularly evident in cross-national comparisons. When patients from two countries exhibit different neural patterns, the divergence is often attributed to illness heterogeneity, genetic factors, or methodological variance. Without locally matched control groups, however, it remains impossible to determine whether such differences reflect culturally patterned baseline organization, disorder-specific mechanisms, or their interaction. Thus, the central methodological vulnerability of transcultural neuroimaging does not lie in insufficient statistical power or analytic sophistication but in the implicit assumption of baseline equivalence. Unless this assumption is empirically tested, claims regarding universal biomarkers or disorder-specific circuits remain epistemologically fragile.

Evidence that Neural Baselines Are Not Culturally Neutral

A key implication of transcultural psychiatry is that culturally patterned differences in self-experience, emotion regulation, and social cognition may not remain “psychological only” but may be reflected in systematic differences at the neural level. Cultural neuroscience and transcultural neuroimaging have produced converging evidence that core neural systems—often treated as universal reference points in psychiatric imaging—show culture-sensitive patterns even in healthy participants.

One of the most influential demonstrations concerns self-referential processing. In a landmark fMRI study, Zhu and colleagues reported that Chinese participants engaged medial prefrontal cortex (mPFC) similarly for judgments about the self and the mother, whereas Western participants showed a stronger mPFC differentiation between self and close other [18]. This finding is not a minor cultural “coloring” of cognition; it directly challenges the assumption that self-related neural signatures represent a culturally invariant baseline. If the neural boundary between self and close others differs between populations, then psychiatric neuroimaging studies that rely on self-related tasks or interpret default-mode alterations against an assumed universal self-processing architecture risk systematic misattribution.

More recent work has extended these findings beyond the original self-mother comparison. Longitudinal studies of acculturation indicate that within-person changes in self-construal are accompanied by changes in medial prefrontal and posterior cingulate responses during self-related processing, suggesting that these neural representations are culturally plastic rather than fixed. Structural imaging studies have further reported culture-related variation in mPFC/OFC and right temporoparietal regions, while resting-state studies have linked individual differences in self-

construal to connectivity within default-mode and social-cognitive networks [19–22].

Culture-sensitive effects are also visible in attentional control and context processing. Hedden and colleagues compared absolute judgments, which require attention to an object independently of its context, with relative judgments, which require attention to the relation between an object and its surrounding context. “Culturally non-preferred” therefore refers to the judgment strategy that is less congruent with the processing style habitually favored in a given cultural setting. Participants recruited attentional control networks more strongly when performing the culturally non-preferred than the culturally preferred judgment [23]. This suggests that the same behavioral performance can be supported by different levels of control-network engagement depending on culturally shaped cognitive habits. In psychiatric imaging—where altered recruitment of control networks is often interpreted as inefficiency or deficit—such baseline differences matter. Without context-appropriate baselines, “hyperactivation” may reflect a mismatch between task demands and habitual strategies rather than disorder-specific dysfunction. Beyond single paradigms, integrative accounts have argued that culture can systematically modulate neural substrates across multiple cognitive and affective domains. Han and Northoff synthesized early transcultural imaging evidence and proposed a programmatic distinction between culture-sensitive and culture-invariant neural mechanisms, emphasizing that neural function is embedded in culturally shaped self- and world-relations rather than floating above them as a universal substrate [24]. This perspective is particularly relevant for psychiatric neuroimaging, where symptom meaning and self-experience are central.

Crucially, evidence for cultural modulation is not restricted to a handful of “classic” self-studies. A quantitative meta-analysis across dozens of fMRI experiments found systematic differences in activation patterns between East Asian and Western samples across both social and non-social tasks, suggesting that culture-related neural variation is widespread rather than exceptional [25]. Such meta-analytic convergence strengthens the conclusion that culture can shape neural baselines at a level relevant to the interpretation of psychiatric contrasts. More recent cross-cultural imaging work has further refined the picture by showing that cultural differences in self-related processing are not uniform across dimensions of self (e.g., social vs. mental vs. physical attributes), indicating that culture-sensitive neural organization can be domain-specific and therefore especially likely to interact with particular symptom dimensions or tasks used in psychiatric research [26]. This is precisely the scenario that produces interpretive ambiguity: a patient–control difference in one setting may not map cleanly onto a patient–control difference in another if the baseline organization of the relevant self- or social-cognitive networks differs. Taken together, these findings support a methodological conclusion that is central for the remainder of this review: healthy neural

baselines are not culturally neutral. Consequently, cross-national psychiatric neuroimaging cannot assume that a given neural deviation reflects the same pathological process across settings. Instead, it must empirically distinguish culturally patterned baseline variation from disorder-related alterations—an inferential task that requires explicit design solutions rather than post-hoc interpretation.

The evidence for culturally patterned neural organization extends beyond individual experimental paradigms. Quantitative synthesis of functional neuroimaging studies has demonstrated systematic differences between East Asian and Western samples across social-cognitive, affective, and non-social processing domains, involving distinct prefrontal, temporoparietal, insular, and parietal networks. Such findings argue against treating culturally patterned variation as a task-specific curiosity and instead suggest that cultural experience can influence multiple neural systems relevant to psychiatric research. More broadly, contemporary cultural neuroscience conceptualizes these effects as emerging from reciprocal interactions between social environments, psychological processes, and neurobiology rather than from fixed group-specific neural traits [25,27].

Transcultural Psychiatry and Neuroimaging: Current Evidence and Conceptual Gaps

Despite the empirical insights of transcultural psychiatry and cultural neuroscience, most psychiatric neuroimaging studies continue to operate within culturally homogeneous sampling frames. Clinical imaging research has produced increasingly sophisticated models of circuit dysfunction in major disorders such as schizophrenia, major depressive disorder, and post-traumatic stress disorder. However, these models are rarely examined in light of cross-cultural variability in symptom structure, illness meaning, and baseline neural organization.

In schizophrenia research, large-scale meta-analyses and multi-site consortia have demonstrated relatively consistent alterations in subcortical volumes and white-matter microstructure [14,28]. These findings are frequently interpreted as evidence for shared neurobiological mechanisms across populations. Yet cultural variables are almost never modeled explicitly. The majority of contributing cohorts originate from high-income Western or East Asian settings, and differences in explanatory models, stigma, family structure, or treatment exposure are rarely incorporated into analytic frameworks. When cross-national comparisons are performed, they often contrast patient groups directly, without incorporating locally matched control groups.

In major depressive disorder, similar patterns are observed. Imaging studies consistently implicate cortical alterations and large-scale network dysconnectivity [15,29]. However, depression itself varies in symptom emphasis across cultures, including the relative salience of somatic versus affective complaints [5,6]. If neural circuits are mapped onto symptom

clusters whose cultural weighting differs across settings, then group-level neural differences may reflect variation in symptom composition rather than invariant disease mechanisms. Without explicit modeling of contextual baseline effects, such distinctions remain inferentially opaque.

Post-traumatic stress disorder offers a further illustration. Meta-analytic work has identified hyperactivation of limbic regions and reduced prefrontal regulation as relatively stable correlates [30]. At the same time, transcultural research demonstrates variability in trauma narratives, avoidance patterns, and culturally specific stress syndromes [10]. In refugee and migrant populations, trauma exposure frequently co-occurs with post-migration stressors such as acculturative demands, discrimination, legal insecurity, social isolation, language barriers, unemployment, and socioeconomic hardship. These factors may independently or interactively contribute to depression, anxiety, and post-traumatic stress symptoms and therefore complicate the interpretation of neurobiological findings obtained across migration and national contexts [31–33].

Across these diagnostic domains, the central problem is therefore one of culturally anchored inference. Without designs that explicitly model both local baseline variation and disorder-related effects, cross-national neuroimaging findings remain difficult to interpret.

The conceptual gap, therefore, does not lie in the absence of imaging data but in the absence of culturally anchored inference. Transcultural psychiatry has demonstrated that symptoms and trajectories vary across contexts; cultural neuroscience has shown that neural organization itself can be culture-sensitive. Yet psychiatric neuroimaging has not systematically integrated these insights into its design logic. The result is an epistemological blind spot: the conflation of culture and pathology.

This gap motivates the methodological framework developed in the following section: a 2×2 factorial design that allows empirical separation of local contextual baseline effects from disorder-related neural alterations.

METHODOLOGICAL CHALLENGES AND A 2×2 FACTORIAL DESIGN

The preceding sections have established two empirically supported premises. First, transcultural psychiatry demonstrates systematic variation in symptom structure, illness meaning, and outcome across sociocultural contexts [5–12]. Second, cultural neuroscience shows that neural organization itself can be modulated by culturally shaped models of selfhood, cognition, and emotion [18–26]. Taken together, these findings imply that psychiatric neuroimaging cannot assume culturally invariant baselines. The central methodological question is therefore how study designs can disentangle local contextual baseline effects from disorder-related neural alterations.

Standard case-control designs compare patients and healthy controls within a single sociocultural setting. Such designs are appropriate for identifying disorder-related contrasts within that setting, but they do not address cross-context generalizability. Conversely, cross-national or cross-site comparisons that directly contrast patient groups from different settings frequently omit locally matched control groups. In such designs, any observed difference between patient groups is ambiguous: it may reflect disorder heterogeneity, local contextual variation, treatment exposure, social adversity, population composition, or scanner-related variance.

Statistical harmonization procedures can address technical variance across scanners and sites, but they cannot resolve conceptual ambiguity. If local baseline differences are not explicitly measured, they cannot be analytically separated from pathological deviations. The problem is therefore not primarily technical but structural.

A way of addressing this structural limitation is to use a minimal 2×2 factorial framework for transcultural psychiatric neuroimaging.

In a comparison of two recruitment settings, the design requires four groups:

- Patients from Setting A;
- Healthy controls from Setting A;
- Patients from Setting B;
- Healthy controls from Setting B.

This 2×2 factorial architecture allows explicit estimation of:

1. Main effect of disorder;
2. Main effect of recruitment setting/context;
3. Setting/context $\times$ disorder interaction.

Only the interaction term permits principled statements about whether the neural manifestation of a disorder differs across recruitment settings. Without this design, cross-site contrasts remain inferentially underdetermined.

Importantly, the grouping factor in this design should not be equated with “culture” itself. Country, region, or recruitment site is a pragmatic contextual indicator, whereas culture is a multidimensional and partly individual-level construct. Relevant dimensions may include language use, ethnicity, religious affiliation, socioeconomic position, migration and acculturation history, urban or rural background, self-construal, family organization, social norms, and explanatory models of illness. Two participants recruited at the same site may therefore differ substantially on culturally relevant dimensions, while participants recruited in different countries may share important cultural schemas.

Whenever feasible, these dimensions should be measured directly at the individual level and modeled as continuous predictors, covariates, moderators, or mediators alongside the categorical site factor. The 2×2 structure should thus be understood as a minimal architecture for identifying contextual baseline differences, not as a method for “controlling culture” as a unitary variable. It indicates where contextual differences occur; additional cultural measurement is required to explain what those differences mean.

The 2×2 design also clarifies the frequently neglected distinction between state-dependent and trait-like neural features. If patients in both settings deviate similarly from their respective local control groups, this suggests a potentially context-invariant disorder mechanism. If deviations differ in magnitude or direction, this indicates an interaction between local baseline organization and disorder expression.

Moreover, if healthy control groups themselves differ across settings, this provides direct evidence of local baseline variation. Such differences are not statistical nuisances but essential data for interpreting clinical contrasts. Without local baselines, it is impossible to determine whether observed neural patterns in patients represent illness-specific changes or locally normative configurations.

Despite its conceptual simplicity, the 2×2 design poses practical and inferential challenges. It requires coordinated multi-site recruitment, culturally validated diagnostic instruments, harmonized imaging protocols, and sufficient statistical power to detect interaction effects. Recruitment of adequately matched control groups within each setting increases resource demands substantially, and limited imaging infrastructure may complicate implementation in low- and middle-income contexts. Matching itself is non-trivial because age, sex, education, socioeconomic position, migration history, treatment exposure, and other contextual variables may differ systematically between groups. Scanner harmonization can reduce technical variance, but it cannot substitute for careful sampling and measurement.

The framework also does not solve within-site cultural heterogeneity or determine which dimensions of cultural variation are neurobiologically relevant. There is currently limited empirical guidance on how much variation, and on which cultural dimensions, is required before differences in neural structure or function should be expected. Multilevel and dimensional approaches are therefore likely to be especially useful when sample sizes permit, because they can distinguish site-level effects from individual-level cultural and socioeconomic variation. The categorical 2×2 comparison should be regarded as a starting point for inference rather than a complete model of culture.

These limitations do not negate the value of the design; rather, they define its scope. Its principal advantage is that it prevents one specific inferential error: attributing differences between patient groups from different settings to disorder-related mechanisms without determining whether analogous differences are already present in locally recruited healthy participants.

The 2×2 framework does not relativize biological psychiatry; it refines its inferential logic. By making local baselines explicit rather than implicit, it allows neural findings to be interpreted with greater precision and shifts the field from assuming universality to testing it. In this sense, transcultural psychiatry and neuroimaging are not opposing paradigms but complementary perspectives. Transcultural psychiatry specifies the conditions under which biological findings become meaningful, while neuroimaging provides tools to investigate how sociocultural context and neural mechanisms interact.

DISCUSSION: TOWARD A CULTURALLY ANCHORED NEUROIMAGING PSYCHIATRY

The convergence of transcultural psychiatry and neuroimaging research reveals a fundamental methodological tension. Transcultural psychiatry has demonstrated that psychiatric syndromes vary in expression, meaning, and outcome across sociocultural contexts [5–12]. Cultural neuroscience has provided evidence that neural organization itself can be modulated by culturally shaped models of selfhood, cognition, and affect regulation [18–26]. Yet psychiatric neuroimaging frequently proceeds as if neural baselines were culturally neutral and universally comparable. This tension does not undermine the biological investigation of mental disorders. Rather, it clarifies the conditions under which biological findings can be interpreted. If neural systems supporting self-related processing, social cognition, or emotion regulation show culturally patterned baseline variation, then disorder-related contrasts must be evaluated against these baselines. Without locally anchored control groups, cross-national imaging results risk conflating contextual variation with pathology.

A 2×2 factorial design provides a minimal methodological response. By requiring locally recruited patient and control groups within each setting, it enables explicit modeling of main effects of disorder, main effects of setting, and their interaction. Only this factorial structure allows researchers to determine whether a neural alteration represents a potentially context-invariant disorder mechanism or a context-specific modulation of illness expression. Importantly, this is not a claim of statistical novelty and not a call for methodological perfectionism, but for epistemic clarity. Harmonization procedures, large sample sizes, and advanced analytic pipelines improve reliability but cannot compensate for structurally ambiguous designs. The key question is not whether

contextual effects exist—they have been repeatedly observed [18–26]—but whether they are measured and modeled.

The implications extend beyond technical design. Claims regarding universal biomarkers, globally applicable neural signatures, or context-independent circuit dysfunction must be evaluated in light of sampling frames that remain heavily concentrated in Western and high-income populations [13]. A related issue concerns the reference infrastructure used to define neural “normality.” Standard templates, atlases, normative datasets, and preprocessing pipelines may not be equally representative of all populations. Their transfer across demographically and culturally diverse samples should therefore be treated as an empirical question rather than assumed to be neutral, particularly where population differences could affect registration, segmentation, or normative comparison. A globally representative neuroimaging psychiatry requires not only geographic expansion but also scrutiny of the reference models against which individual brains are interpreted.

The same concern has a clinical analogue. As discussed above, experiences that resemble hallucinations or delusion-like phenomena may be culturally sanctioned and non-pathological in particular religious or mediumistic contexts [8,9]. If cultural meaning, distress, impairment, and local norms are not considered, minority patients may be differentially classified even before neuroimaging enters the diagnostic process. This reinforces the need to separate the phenomenological form of an experience from its cultural interpretation and clinical significance.

More generally, “culture” should not be reified as a country-level independent variable. The categorical setting factor in a 2×2 design is an inferential anchor, whereas explanation requires more granular measurement of culturally relevant characteristics at the individual and community levels. This distinction is particularly important in migrant, multilingual, multiethnic, and socioeconomically heterogeneous populations, in which within-site variation may be as informative as between-site variation.

Transcultural psychiatry does not relativize biology; it contextualizes it. Neuroimaging does not invalidate cultural psychiatry; it offers tools to examine how sociocultural context and neural mechanisms interact. Their integration demands designs that are capable of separating local baseline variation from pathological deviation while also measuring the cultural dimensions that may account for those differences. In this sense, culturally anchored neuroimaging is a necessary step toward a genuinely global biological psychiatry.

ETHICAL STATEMENT

Ethics Approval

This article is a conceptual review of published literature and reports no original research involving human participants or animals. Informed consent: Not applicable. Trial registration: Not applicable.

Declaration of Helsinki and STROBE Reporting Guideline

Not applicable. This article does not report an original observational study or clinical trial.

DATA AVAILABILITY

No new datasets were generated or analyzed for this conceptual review.

CONFLICTS OF INTEREST

The author declares that he has no conflicts of interest.

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