

WHAT THRIVING LOOKS LIKE IN THE BRAIN AND WHY PAKISTAN NEEDS TO KNOW

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ABSTRACT

Psychology in Pakistan has long been shaped by a deficit-focused model, one that prioritises the diagnosis and treatment of disorder over the scientific study of human flourishing. Positive psychology offers a necessary counterweight, yet it continues to occupy a marginal position in Pakistani clinical, academic, and research spaces; frequently dismissed as insufficiently rigorous or culturally irrelevant. This editorial argues that neuroscience provides the missing foundation. Drawing on evidence from affective and cognitive neuroscience, it demonstrates that flourishing is not merely a philosophical or motivational construct but a biological reality with measurable neural correlates. Resilience, gratitude, social connection, and optimism each engage specific, identifiable brain systems, findings that ground positive psychology in the kind of empirical evidence that Pakistani academic and medical contexts demand. The emerging field of positive neuroscience, which examines the neural substrates of well-being and human strength, offers Pakistani psychology a path toward greater credibility, interdisciplinary dialogue, and practical utility. With one of the highest psychiatric disorder prevalence rates and lowest mental health professional ratios in the world, Pakistan cannot afford a psychology that only responds to breakdown. This editorial calls on researchers, educators, clinicians, and journals to begin integrating neuroscience into positive psychology in Pakistan, not as an enrichment, but as a prerequisite for the field's legitimacy and impact.

1. Language We Use for the Mind

When we talk about mental health in Pakistan, we almost always begin with what goes wrong. We speak of depression, anxiety, trauma, and breakdown. Our clinics are built around diagnosis. Our research is shaped by pathology. Our public conversations, when they happen at all, centre on suffering. This is not without reason; the burden is real, the need is urgent, and for too long even this conversation was suppressed. But something is missing from the picture we have drawn of the human mind. Human beings do not only break. They endure. They connect, find meaning, rebuild, and flourish. These are not exceptions to psychological life; they are central to it. And yet the science of thriving, of what allows people to live well rather than merely survive, remains peripheral in Pakistani psychology. It is treated as optional, as supplementary, or not treated at all. This editorial makes a straightforward argument: flourishing is not just a philosophical ideal or a motivational concept – it is a biological reality. The brain has mechanisms for thriving just as it has mechanisms for suffering. Positive neuroscience, the study of those mechanisms, offers Pakistani psychology something it urgently needs: a scientifically rigorous foundation for the study of well-being. This piece is an invitation to take that foundation seriously.

II. Positive Psychology at the Margins

Positive psychology, *the scientific study of what makes life worth living*, has been a recognised field for over two decades. Since Seligman and Csikszentmihalyi (2000) called for a reorientation of psychology toward human strengths and virtues, a substantial body of research has accumulated on topics including happiness, gratitude, resilience, optimism, flow, and meaning. This is not self-help literature. It is peer-reviewed, empirically grounded science. Yet in Pakistan, positive psychology occupies a precarious position. It is present in some academic curricula; during my own undergraduate studies, it appeared as an elective, peripheral by design, heavy on theory and disconnected from the growing research at its intersection with neuroscience and clinical psychology. This remains largely the case. In clinical, medical, and mainstream academic spaces, it frequently faces dismissal. It is characterised as Western, as soft, as insufficiently rigorous, or as motivational content dressed in academic language. These criticisms are not entirely without basis, the field has at times overclaimed, and some of its popular applications have drifted far from its scientific roots. But the dismissal is largely disproportionate to the evidence, and it has a cost. That cost is practical. When positive psychology is not taken seriously in clinical training, practitioners are not equipped with tools for building strength, not only treating disorders. When it is absent from research agendas, we do not accumulate evidence on what helps Pakistani individuals and communities thrive. When it is excluded from policy conversations, mental health frameworks remain entirely reactive, responding to breakdown rather than investing in resilience. And there is a cultural and institutional context in which psychology, particularly its softer dimensions, competes for legitimacy against medical and biomedical frameworks.

- The question worth asking is not whether positive psychology belongs in Pakistani psychology. It does. The question is why it continues to struggle for legitimacy, and what might change that.

III. Flourishing Is Biological

Part of the answer lies in biology. One of the persistent vulnerabilities of positive psychology is that its constructs, well-being, flourishing, meaning, gratitude, can appear abstract, culturally variable, and difficult to anchor in objective science. Neuroscience changes that. Over the past two decades, advances in neuroimaging, psychophysiology, and cognitive neuroscience have made it possible to observe, measure, and map the biological substrates of positive psychological states. Flourishing is not just a feeling. It has a neural signature. Consider resilience, perhaps the most practically relevant positive psychology construct for a context like Pakistan. Resilience is not simply a personality trait or an attitude. It is supported by specific neural systems. Research has identified the prefrontal cortex as central to emotion regulation and stress recovery, with higher prefrontal activity associated with faster return to baseline following adversity (Davidson & McEwen, 2012). The amygdala's reactivity to threat, and the degree to which the prefrontal cortex can modulate that reactivity, appears to be a key neurobiological mechanism underlying individual differences in resilience. These are not abstract constructs, they are measurable, and they are trainable.

Gratitude, long a cornerstone of positive psychology interventions, also has identifiable neural correlates. Studies using functional magnetic resonance imaging have found that feelings of gratitude are associated with activation in the medial prefrontal cortex, a region that is involved in social cognition, moral reasoning, and reward processing (Fox et al., 2015). This means that when gratitude practices are recommended in therapeutic or educational contexts, they are not simply encouraging a pleasant attitude. They are engaging specific neural circuits involved in prosocial processing and positive affect regulation. Social connection, what positive psychology identifies as one of the most robust predictors of well-being, is similarly grounded in neurobiology. The brain processes social belonging through overlapping systems with physical survival. Eisenberger and Lieberman (2004) demonstrated that social exclusion activates the dorsal anterior cingulate cortex, the same region involved in processing physical pain. Belonging, then, is not metaphorically important, it is neurobiologically fundamental. For a society in which social bonds and community ties are culturally central, this neuroscience is not foreign. It is confirmatory.

Optimism, too, has a traceable neural basis. Research by Sharot and colleagues (2007) found that imagining positive future events activates the rostral anterior cingulate cortex and amygdala, regions associated with emotional processing and motivational salience. The human brain, it appears, is oriented toward the future and capable of generating positive anticipatory states, what we might refer to as hope, through identifiable neural mechanisms. The optimism bias, the tendency of most people to expect better futures than probability warrants, is not a cognitive error to be corrected. It is a feature of the healthy brain, and one that positive psychology can work with rather than against.

IV. What Positive Neuroscience Offers

Positive neuroscience is not a new discipline so much as a reorientation of an existing one. Where neuroscience has historically focused on pathology, what goes wrong in the brain during depression, psychosis, or addiction, positive neuroscience asks the parallel question: what goes right? What neural systems underlie flourishing, and how can we understand, support, and strengthen them? The term was formalised by Seligman and colleagues, and the field has since grown to encompass research on the neural basis of well-being, character strengths, virtue, creativity, and meaning (Pawelski & Moores, 2012). What positive neuroscience offers positive psychology, specifically, is credibility of a kind that the field has struggled to claim on its own. In academic and clinical contexts where biological evidence is treated as more objective, more rigorous, and more legitimate than self-report or questionnaire-based data alone, neuroscience provides an anchor. It does not replace psychological measurement; subjective experience remains essential to understanding well-being. But it adds a layer of evidence that is harder to dismiss, and it opens positive psychology to dialogue with medicine, psychiatry, and clinical neuroscience in ways that have been limited by the field's predominantly psychological framing. This is not about reducing well-being to brain states or claiming that neuroscience has all the answers. The relationship between neural activity and subjective experience is complex, and the risk of reductionism is real. But there is an important difference between reductionism and integration. Positive neuroscience at its best does not claim that gratitude is nothing but medial prefrontal activation, it claims that gratitude involves medial prefrontal activation, and that knowing this helps us understand what gratitude does, how it can be cultivated, and why it matters. That is a richer picture than either field produces alone.

V. Why Pakistan Specifically?

The case for positive neuroscience is not equally urgent everywhere. In contexts where positive psychology is already well-resourced and broadly accepted, neuroscience integration is an enrichment. In Pakistan, it is something closer to a prerequisite, a condition for the field being taken seriously at all. Pakistan's mental health landscape is shaped by several converging realities. The National Psychiatric Morbidity Survey of Pakistan (2022), the first nationally representative study of its kind, found a lifetime prevalence of psychiatric disorders of 37.91% and a current prevalence of 32.28% – figures that speak to the scale of unaddressed psychological suffering in the country (Rahman et al., 2024; Thompson & Saleem, 2025). Yet the infrastructure to address this burden is critically inadequate. Pakistan has only 0.19 psychiatrists per 100,000 population, among the lowest figures recorded globally, with just 11 psychiatric hospitals and 100 clinical psychologists serving a population of over 200 million, leaving approximately 90% of people with mental illness untreated (Dayani et al., 2024). In this context, a purely disorder-focused mental health model is not just incomplete, it is strategically insufficient. With limited clinical resources, Pakistan cannot afford a mental health system that only responds to breakdown. It needs frameworks that build capacity, strengthen resilience, and promote well-being at the population level before crises emerge. This is precisely what positive psychology, informed by neuroscience, is positioned to offer.

Moreover, many of the constructs that positive neuroscience illuminates are not foreign to Pakistani culture, they are deeply familiar. Sabr, the practice of patient endurance in the face of adversity, maps meaningfully onto what neuroscience describes when it studies resilience and stress regulation. Shukr, the orientation of gratitude toward blessings received, engages the same neural circuits that gratitude research examines. The communal bonds and social ties that define much of Pakistani social life align with what neuroscience tells us about the biological importance of belonging. Positive neuroscience does not import an alien framework into Pakistani psychology. It provides a biological vocabulary for phenomena that Pakistani lived experience already knows. This is an important

point. One of the legitimate critiques of positive psychology in non-Western contexts is that its constructs are culturally embedded in individualist assumptions including personal achievement, self-actualisation, autonomous flourishing. Neuroscience cuts beneath cultural variation to mechanisms that are biologically shared while remaining open to cultural expression. The brain's reward systems respond to prosocial connection whether that connection is expressed through Western notions of friendship or through Pakistani notions of family and community belonging. Biological grounding does not erase cultural context, it provides a foundation on which culturally specific expressions of thriving can be studied and supported.

VI. What Needs to Happen

The integration of neuroscience into positive psychology in Pakistan is not currently happening in any systematic way. This editorial argues that it should begin, and that it should begin along several fronts simultaneously. For researchers, the call is to broaden the questions being asked. Pakistani psychology research is predominantly focused on disorder, distress, and clinical populations. There is a need for studies that examine well-being, resilience, and positive functioning in Pakistani samples, and for a subset of those studies to include neurobiological measures that can connect psychological constructs to biological mechanisms. EEG, cortisol reactivity, autonomic measures, and eventually neuroimaging can all be brought to bear on questions about how Pakistanis thrive, not only how they suffer. This is methodologically achievable, and it would produce findings with significant practical value. For educators, the call is to include positive neuroscience in psychology curricula. Students training in psychology in Pakistan should graduate with an understanding not only of mental disorder and its neural correlates, but of mental health and its neural substrates. Courses in cognitive neuroscience, affective neuroscience, and the neuroscience of well-being should be considered essential, not supplementary. This equips the next generation of Pakistani psychologists to speak across disciplinary boundaries and to situate their work in biological evidence.

For clinicians, the call is to expand the therapeutic frame. Evidence-based interventions targeting resilience, gratitude, meaning, and social connection have demonstrated efficacy in international research. These are not replacements for pharmacological or psychotherapeutic treatment of disorder, they are complements to it, and in many cases, they are accessible, low-cost, and scalable in ways that clinical intervention alone is not. Clinicians who understand the neurobiological basis of these interventions are better placed to integrate them thoughtfully and to explain their rationale to patients and colleagues who remain sceptical. For the field as a whole, the call is to take the integration seriously at the level of scholarly discourse. This journal is one of the few platforms in Pakistan dedicated to positive psychology. It is well-positioned to lead a conversation that the field needs. Publishing work that engages with neuroscience that situates positive psychological constructs in biological evidence, that examines mechanisms rather than only outcomes, would signal that positive psychology in Pakistan is not standing still.

VII. Back to the Human Question

There is a question that sits underneath all of this, one that every person who has ever struggled or recovered or rebuilt has asked in some form: what does it mean to live well? It is a question that philosophers like Aristotle and Marcus Aurelius have addressed for millennia, that religion has answered in its own terms, and that psychology has been trying to approach scientifically for the past century. Neuroscience does not answer this question; it was never going to. But it tells us something important about the creature who asks it. The human brain is not a machine built only for survival and threat detection. It is a social organ, shaped by connection, capable of gratitude, oriented toward the future, and built, in part, to flourish. The neural systems that support resilience, meaning, compassion, and hope are not secondary features of human biology. They are central to it. A psychology that ignores them is working with an incomplete picture of what human beings are. Pakistan deserves a psychology that works with the whole picture. Its people endure extraordinary pressures – economic, social, political, and personal. They also demonstrate extraordinary capacities for resilience, solidarity, and meaning-making in the face of those pressures. A science that only studies what breaks misses the most important part of the story. Thriving looks like something in the brain. It is time Pakistani psychology starts paying attention.

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