



Journal of Political Science and International Relationship (JPSIR)

ISSN: 3065-6125 (ONLINE)

VOLUME 3 ISSUE 1 (2026)



PUBLISHED BY
E-PALLI PUBLISHERS, DELAWARE, USA

Battlefield Nuclear Thresholds and the 2025 India–Pakistan WarRavi Kumar^{1*}, Sivakumar M V¹**Article Information****Received:** July 10, 2026**Accepted:** August 21, 2026**Published:** October 01, 2026**Keywords***Escalation, Full-spectrum
Deterrence, India–Pakistan,
Operation Sindoor, Tactical Nuclear
Weapons***ABSTRACT**

Is limited or battlefield nuclear employment re-emerging as a usable instrument of statecraft? This article takes the four-day India–Pakistan confrontation of May 2025 as its empirical anchor for that question. The study is a theory-guided interpretive single-case analysis that draws on official statements and briefings issued by both governments, post-crisis reconstructions by research institutions, and contemporaneous reporting, read against the established scholarly literature on deterrence thresholds. It argues that Pakistan's investment in tactical nuclear weapons (TNWs) under the doctrine of full-spectrum deterrence has not stabilized the subcontinent. It has instead produced a signaling environment in which thresholds are deliberately left ambiguous so that crises will attract international intervention. The crisis that followed the Pahalgam terror attack of April 22, 2025, tested those thresholds. India's Operation Sindoor combined precision conventional strikes with disciplined escalation management, and Pakistan, despite reports that its National Command Authority was convened, never moved toward battlefield nuclear use. The article reads that outcome against the classic literature on deterrence thresholds, the logic of limited nuclear options, and India's declaratory policy of massive retaliation. It concludes that any Pakistani resort to TNW employment would court disproportionate nuclear punishment rather than a negotiated pause. The 2025 case does not prove that TNWs stabilize anything. It shows that restraint was a contingent political choice, and that battlefield nuclear use remains the most volatile variable in South Asian strategic stability.

INTRODUCTION

On the night of May 6–7, 2025, the Indian Air Force launched Operation Sindoor, striking nine sites across Pakistan and Pakistan-occupied Kashmir in response to the massacre of twenty-six civilians at Pahalgam two weeks earlier (Ministry of External Affairs, Government of India, 2025b; Stimson Center, 2025). What followed over four days was the most intense aerial and missile exchange between two nuclear-armed states since the end of the Cold War. Fighter aircraft operated at stand-off ranges in large numbers, and cruise missiles, ballistic missiles, loitering munitions, and drones reached deep into each other's territory (Peri, 2025). A ceasefire took effect on May 10, brokered in part through hurried U.S. diplomacy (Stimson Center, 2025; U.S. Department of State, 2025). Pakistani commentators have since given the short war several names, among them the “87-hour war” and Operation Bunyan-un-Marsoos, and it has become the most closely analyzed episode of subcontinental crisis bargaining since Kargil (Panag, 2025; Saleem, 2025).

This article focuses on one dimension of that episode: thresholds. Did the 2025 crisis vindicate or discredit the proposition that Pakistan's tactical nuclear weapons (TNWs) are a credible instrument of deterrence? And does limited or battlefield nuclear employment remain a genuine possibility in South Asia? The question is not academic. Pakistan has invested heavily in a low-yield, short-range nuclear delivery capability, chiefly the Nasr (Hatf-IX) missile, expressly to plug what its strategic community describes as a “gap” at the tactical level of its

deterrent posture (Center for Strategic and International Studies [CSIS], 2024; Inter-Services Public Relations [ISPR], 2011). Indian declaratory doctrine, for its part, promises “massive” retaliation to any nuclear use against Indian forces anywhere, battlefield weapons included (Prime Minister's Office, Government of India, 2003). Between these two postures lies a zone of ambiguity in which miscalculation could produce catastrophe.

The 2025 war has already produced a first wave of analysis, including the Stimson Center reconstruction and early assessments by Ladwig and Das (Das, 2025; Ladwig, 2025a; Stimson Center, 2025). This article puts the episode to a different use. It treats the crisis as a test of the proposition, central to Pakistan's full-spectrum posture, that battlefield nuclear weapons create usable thresholds. It then reads the result against the older literature on limited nuclear options. The approach is an interpretive reading of a single case; the research design, the source base, and the limits of single-case inference are set out in the methods section below.

The article proceeds as follows. The literature review revisits the conceptual vocabulary of thresholds, signaling, and limited nuclear options as it has evolved from the Cold War canon to contemporary work on regional nuclear dyads. It then traces Pakistan's movement from “credible minimum deterrence” to “full-spectrum deterrence,” situates the Nasr within that shift, and examines Indian nuclear doctrine and what it implies for any Pakistani resort to battlefield use. The following section sets out the research design, the sources, and

¹ Central University of Kerala, India* Corresponding author's e-mail: ravikaloniam@gmail.com

the analytical procedure. The results and discussion then offer a close reading of the 2025 crisis, with attention to escalation management, signaling, and the non-use of nuclear threats, before asking what the episode reveals about the prospects for battlefield nuclear employment in future crises. The answer is not reassuring.

The claim, in short, is this: Pakistan's TNWs remain a genuine threat to regional stability because their declaratory purpose, deterrence, sits in tension with their operational logic, which is warfighting. Any employment of such weapons, however limited in yield or geography, would court Indian retaliation at a scale disproportionate to the initiating act. The 2025 crisis showed that Pakistani decision-makers understood this. It did not show that they always will.

LITERATURE REVIEW

Thresholds, Signaling, and the Logic of Limited Nuclear Options

The vocabulary of thresholds in nuclear strategy is older than most of the weapons it describes. Bernard Brodie's early insistence that the bomb had made traditional victory obsolete already contained the recognition that the line between conventional and nuclear war would become the central analytic problem of the atomic age (Brodie, 1946, p. 76). Thomas Schelling gave the threshold its canonical formulation two decades later. He described it as a "focal point," a discontinuity in the spectrum of violence. It mattered not because of any physical property but because both sides recognized it as a shared coordination device for tacit bargaining (Schelling, 1966, pp. 137–138). Herman Kahn's escalation ladder tried to specify, rung by rung, how adversaries might climb and descend a graduated sequence of violent exchanges. The ladder has been mocked for its scholastic detail, but its core insight has aged well: where clean firebreaks are absent, miscalculation follows (Kahn, 1965, p. 40).

Robert Jervis pushed the argument further. Mutual vulnerability, he insisted, made the search for usable nuclear options a doctrinal blind alley. A state that convinced itself it could fight and win a limited nuclear exchange had already committed the fallacy of treating nuclear weapons as larger conventional ones (Jervis, 1989, pp. 73, 75). Yet the appeal of limited nuclear options has proved irrepressible, precisely because the alternative, a posture that promises only catastrophe, has always looked politically useless against aggression calibrated to fall below the threshold of existential threat. Debates within the North Atlantic Treaty Organization (NATO) over flexible response, Soviet interest in operational-tactical nuclear forces, and the Carter-era countervailing strategy all reflected the same pressure. If deterrence is to cover the full spectrum of possible aggressions, the deterrent must itself be graduated (Freedman & Michaels, 2019, pp. 411–430; Long, 2008, pp. 17–38; Yost, 2011).

Scholarship on regional nuclear dyads has inherited this dilemma. Vipin Narang's typology of regional nuclear postures distinguishes catalytic, assured retaliation, and

asymmetric escalation strategies, and places Pakistan squarely in the last category. Such states rely on the first use, or threatened first use, of nuclear weapons to deter a conventionally superior adversary (Narang, 2010). Asymmetric escalation postures, Narang argues, deter conventional aggression more reliably than the alternatives, but at the cost of much higher crisis instability (Narang, 2014, pp. 10, 12). Paul Kapur reached a similar conclusion by a different route: Pakistani acquisition of nuclear weapons emboldened rather than restrained its support for sub-conventional violence, an "instability-instability paradox" (Kapur, 2007, p. 34). The formulation inverts Glenn Snyder's classic stability-instability paradox, in which stalemate at the strategic level licenses violence lower down (Snyder, 1965, pp. 198–199).

The literature on limited nuclear options has taken on new urgency in the last decade. Andrew Futter and Benjamin Zala chart how missile defense, precision conventional munitions, and cyber capabilities have blurred the old firebreaks. They call the result a "third nuclear age," one in which the taboo on use, though still strong, is no longer uncontested (Futter & Zala, 2021). Brad Roberts defends the retention of limited nuclear options on the ground that the alternative is self-deterrence in the face of adversary escalation (Roberts, 2016, pp. 96, 99). Keir Lieber and Daryl Press argue, controversially, that technological change is eroding the survivability of small arsenals and generating incentives for first use before it is too late (Lieber & Press, 2017). Whatever one makes of these positions, they share a premise: the threshold between conventional and nuclear war is not a natural kind but a political construct, and political constructs can be unmade. The main rival reading of nuclear restraint is Nina Tannenwald's: non-use rests on a normative prohibition, a taboo, rather than on deterrent threats alone (Tannenwald, 1999). Any account of Pakistani behavior in 2025, including the one offered below, has to allow for the possibility that normative inhibition, not Indian doctrine, did some of the restraining.

Signaling under these conditions is hard. Schelling's treatment of the "manipulation of risk" assumed that tacit bargaining in crisis depends on an adversary's ability to read signals accurately and reciprocate in kind (Schelling, 1966, p. 99). James Fearon's distinction between signals that tie hands and signals that merely sink costs sharpens the problem: ambiguous nuclear threats are cheap unless a crisis forces the sender to pay for them (Fearon, 1997). The South Asian dyad has historically had weak signaling infrastructure, compressed decision timelines, and the standing possibility that non-state actors will force the hand of one or both governments (Krepon & Thompson, 2013, pp. 21–27). Kargil in 1999, the 2001–2002 mobilization, Mumbai in 2008, the 2016 surgical strikes, and the 2019 Balakot episode each supplied incremental evidence that signaling between New Delhi and Islamabad was improving, and also that the margin for error remained thin (Ganguly & Hagerty, 2005, p. 188; Yusuf, 2018, pp. 168–176). The 2025 crisis now joins that sequence as its most instructive case.

Pakistan's Full-Spectrum Deterrence and the Tactical Turn

Pakistan's nuclear posture has passed through three phases since the May 1998 tests. The first was deliberate ambiguity under the rubric of "minimum credible deterrence," followed by a consolidation phase under "credible minimum deterrence." Since 2011, the Strategic Plans Division has described a more assertive posture as "full-spectrum deterrence" (FSD) (Salik, 2009, pp. 210–232). The press release accompanying the first test of the Nasr in April 2011 announced the shift. In it the Inter-Services Public Relations Directorate described the new system as a "quick response" weapon developed to "add deterrence value to Pakistan's Strategic Weapons Development programme at shorter ranges" (CSIS, 2024; ISPR, 2011).

The intellectual architect of FSD, Lieutenant General (retired) Khalid Kidwai, has set out its logic in public on two notable occasions. The first was a conversation at the 2015 Carnegie International Nuclear Policy Conference. The second was a keynote to a February 2020 workshop on South Asian strategic stability convened by the International Institute for Strategic Studies (IISS) and the Center for International Strategic Studies (CISS). There he described a deterrent covering targets from "zero range" to 2,750 kilometers, held in a tri-service inventory across three tiers of weapons, strategic, operational, and tactical (Carnegie Endowment for International Peace, 2015; Kidwai, 2020). The rationale, he argued, was that Indian limited-war thinking, and specifically the Cold Start doctrine, had created a lacuna at the lower end of the conflict spectrum that Pakistan's earlier posture could not credibly cover. The Nasr, with its sixty-kilometer range and low-yield warhead, was designed to plug that gap (M. Ahmed, 2016; Carnegie Endowment for International Peace, 2015, pp. 7–10).

Several features of this posture deserve emphasis. Pakistani officials have consistently maintained that FSD is a deterrent rather than a warfighting strategy, and that any tactical employment would remain under the centralized authority of the National Command Authority (NCA) (Salik, 2016). The posture explicitly rejects no-first-use and preserves ambiguity about the thresholds at which nuclear use would be authorized (Z. Khan, 2015). The arsenal has been growing: Hans Kristensen and his colleagues estimated the stockpile at roughly 170 warheads in 2025, with one of the fastest production rates in the world (Kristensen *et al.*, 2025). The delivery portfolio has diversified across land, air, and sea. It now includes the Babur-3 sea-launched cruise missile and the Ababeel, advertised as capable of carrying multiple independently targetable re-entry vehicles (MIRVs), which together are meant to supply a credible second strike (Joshi, 2013; Kristensen *et al.*, 2025).

The problems with this posture are well rehearsed. Mansoor Ahmed, writing from within the Pakistani strategic community, defends the Nasr as a necessary answer to Indian limited-war planning (M. Ahmed, 2016).

The critics are more persuasive. Sadia Tasleem points out that battlefield nuclear use would almost certainly produce strategic consequences, which makes the distinction between "tactical" and "strategic" employment illusory at the level of political effect (Tasleem, 2016). Feroz Hassan Khan draws attention to the command-and-control dilemmas that accompany any forward deployment of short-range nuclear systems (F. H. Khan, 2012, pp. 395–396). Rabia Akhtar has questioned whether FSD amounts to a drift from deterrence toward warfighting (Akhtar, 2023). Jeffrey McCausland has asked whether Pakistan's fissile-material stocks could sustain the number of Nasr launchers that operationalization would require (McCausland, 2015).

The most telling critique comes from the weapon's own logic. The Nasr's utility depends on forward deployment close to advancing Indian armor. Forward deployment, in turn, requires some delegation of launch authority to field commanders, or at least the pre-positioning of warheads and delivery systems at short notice, and that cuts against the assurance of centralized NCA control (Joshi, 2013). Pakistan's geographic depth is limited. Lahore sits about twenty-five kilometers from the Indian border, and a sixty-kilometer-range nuclear missile fired at Indian forces inside Pakistani territory would contaminate Pakistani soil and kill Pakistani civilians, compounding the political costs of first use (Clary, 2013, pp. 140–141). Christopher Clary has argued that the Nasr is better understood as a signaling device than a military instrument, a weapon whose purpose is to communicate resolve rather than to be fired (Clary, 2013). Whether that signal survived the 2025 crisis intact is now an open question.

One further consideration is structural. Pakistan's pursuit of FSD has unfolded amid accelerating Chinese nuclear modernization, Indian investment in missile defense and canisterized long-range systems, and emerging technologies that complicate survivability calculations for every nuclear force in the region (Dalton & Krepon, 2015, pp. 5–22; Fravel & Medeiros, 2010). Under these conditions the temptation to lean on tactical weapons as an equalizer will likely grow, even as the strategic logic for doing so weakens. China's shadow lies across the same calculations: Chinese-origin aircraft and air-defense systems shaped the 2025 air war, and Beijing's stance in any future crisis will weigh on Islamabad's choices in ways this war only hinted at.

India's Nuclear Doctrine and the Logic of Massive Retaliation

India promulgated its declared doctrine in January 2003, after the 1998 tests and the Draft Nuclear Doctrine of 1999. The doctrine rests on four pillars. Three of them are credible minimum deterrence, no first use, and civilian political control through the Nuclear Command Authority. The fourth commits India to retaliation "designed to inflict unacceptable damage" in response to any nuclear attack on Indian territory or on Indian forces anywhere (National Security Advisory Board, 1999; Prime

Minister's Office, Government of India, 2003). Analysts usually read the 2003 statement as extending the trigger for Indian retaliation to chemical and biological attacks and, more controversially, as making "massive" retaliation applicable even to the use of battlefield nuclear weapons (A. Ahmed, 2014, p. 15; Rajagopalan, 2016).

On paper, the implication for Pakistani TNW employment is unambiguous. A low-yield detonation against Indian armored columns inside Pakistani territory would, by the letter of Indian doctrine, trigger a strike designed to inflict unacceptable damage. Shyam Saran, former chair of the National Security Advisory Board, put it flatly in 2013: "The label on a nuclear weapon used for attacking India, strategic or tactical, is irrelevant from the Indian perspective" (Saran, 2013). Later remarks by senior officials, including Defence Minister Manohar Parrikar in 2016 and Rajnath Singh at Pokhran in 2019, have gestured toward greater doctrinal flexibility, including a possible revision of no first use, without formally abandoning the 2003 framework (Rej, 2019; ThePrint, 2019).

Whether massive retaliation is a credible response to tactical use is the subject of a lively scholarly argument. Rajesh Basrur argues that "massive" retaliation is unnecessary, since even a minimum deterrent can inflict unacceptable damage (Basrur, 2006, p. 53). Ashley Tellis reads "massive retaliation" less as a literal prescription than as rhetoric meant to discourage Pakistani confidence in Indian restraint (Tellis, 2001, p. 339). Christopher Clary and Vipin Narang document growing Indian interest in counterforce targeting, which suggests that operational reality may be more discriminating than the declaratory posture implies (Clary & Narang, 2019). Gaurav Kampani has shown how organizational secrecy historically slowed the translation of Indian doctrine into operational readiness, though that gap has narrowed considerably (Kampani, 2014).

Whatever the operational truth, the declaratory position does real deterrent work. It forecloses, at least rhetorically, the possibility of a negotiated pause after Pakistani first use and so raises the expected cost of any recourse to the Nasr. The 2025 crisis tested whether that rhetorical posture held under acute stress. Days after the ceasefire, Defence Minister Rajnath Singh stood in Srinagar and called for the International Atomic Energy Agency (IAEA) to supervise Pakistan's nuclear arsenal. The statement rejected Pakistani nuclear coercion and implicitly reaffirmed India's willingness to answer any nuclear use with disproportionate force (Business Today, 2025).

MATERIALS AND METHODS

Research Design and Case Selection

The study is a theory-guided interpretive case study of a single crisis. Its purpose is not to estimate the frequency with which nuclear thresholds are approached, which no design applied to so small a universe of cases could do, but to establish what one intensely observed episode does and does not license us to infer about the usability of

battlefield nuclear weapons in South Asia. The procedure is congruence analysis: propositions about crisis behavior are derived from the doctrine of full-spectrum deterrence and from the wider literature on limited nuclear options, and the observed conduct of the two governments between April 22 and May 10, 2025, is then compared against them. Where the observed record fits a proposition, the fit is recorded as consistent evidence rather than as confirmation; where it does not fit, the mismatch is treated as the more informative result.

The 2025 crisis was selected for three reasons. First, it is the most severe conventional exchange between the two states since their nuclearization, which places it near the upper bound of the stress that the dyad has so far sustained. Second, both governments generated an unusually dense public record in real time, including named military briefings, ministerial statements, and rapid institutional reconstructions. Third, the crisis is the first in which the Pakistani tactical arsenal existed as a mature, tested, and repeatedly advertised capability, so that the non-appearance of tactical nuclear signaling is analytically meaningful rather than an artifact of an immature force. The case is therefore treated as a demanding, though not a decisive, test: it exercises Pakistani crisis decision-making at high intensity, but, as the discussion sets out, it never generated the specific ground-offensive scenario for which the Nasr was designed.

Sources and Analytical Procedure

Three classes of material are used. The first is primary documentation issued by the two governments and by third parties: doctrinal statements, official press releases, briefing transcripts, and diplomatic announcements. The second is post-crisis analytical reconstruction by research institutions, principally the Stimson Center, the Observer Research Foundation, the Royal United Services Institute, the Carnegie Endowment for International Peace, and the Council for Strategic and Defence Research. The third is contemporaneous reporting by Indian, Pakistani, and international news organizations, used chiefly to establish the sequence and timing of events. The scholarly literature reviewed above supplies the analytical expectations against which this record is read.

Each class of material carries a distinct liability, and the analysis handles them accordingly. Official statements from belligerents are treated as evidence of declared position rather than of fact, since both governments had strong incentives to overstate losses inflicted and understate losses sustained. Contested factual claims, most obviously the number of aircraft downed, and the proportion of missiles and drones intercepted, are reported as contested rather than resolved, and no part of the argument rests on them. Where a claim is material to the argument, it is corroborated across at least two independent classes of source. Claims that circulated only through single-sourced or anonymously sourced reporting, such as the reported convening of the National Command Authority on May 10, are identified as such in

the text and are analyzed for their signaling significance rather than accepted as established events.

Two limitations follow and are carried through the discussion. The first is inferential: a single case cannot establish a general propensity, and the absence of tactical nuclear use in one crisis is consistent with several different causal stories, including deterrent success, normative inhibition, and simple non-arrival of the triggering scenario. The analysis therefore identifies rival explanations wherever the evidence underdetermines the conclusion and declines to adjudicate between them where it cannot. The second is temporal: the episode is recent, official accounts remain partial, no archival record is available, and later disclosure may revise elements of the sequence reconstructed here. The findings are accordingly stated as an interpretation of the presently available record.

RESULTS AND DISCUSSION

The 2025 Crisis: Escalation, Signaling, and Restraint

On April 22, 2025, terrorists of The Resistance Front killed twenty-six tourists at Pahalgam in the Indian union territory of Jammu and Kashmir. The attack set off a crisis cycle that escalated more sharply than any previous post-nuclearization confrontation between India and Pakistan (Al Jazeera, 2025b; Stimson Center, 2025). India's first response was non-kinetic but substantial: it placed the Indus Waters Treaty in abeyance on April 23, closed diplomatic channels, and moved air and missile assets to forward bases (Ministry of External Affairs, Government of India, 2025a). Pakistan answered the next day with a National Security Committee statement warning that any attempt to divert the waters of the Indus system would be treated as an act of war (Prime Minister's Office, Government of Pakistan, 2025; Stimson Center, 2025). Operation Sindoor began shortly after midnight on May 7 with missile strikes on nine sites that Indian officials identified as infrastructure of Jaish-e-Mohammed and Lashkar-e-Taiba. Targets at Bahawalpur and Muridke lay well beyond Pakistan-administered Kashmir and deep inside Pakistani Punjab, the first Indian strikes on the country's most populous province since 1971 (Al Jazeera, 2025a). Indian spokespersons described the strikes as "focused, measured and non-escalatory." Pakistani officials countered that they had hit civilian sites and killed thirty-one civilians (Press Information Bureau, Government of India, 2025). Over the next seventy-two hours, the crisis widened into the subcontinent's first large-scale drone war. Pakistani drone incursions reached Indian civilian areas, and Indian air defenses intercepted hundreds of incoming systems (Saxena, 2026). The Border Security Force later reported that it had foiled 413 drone attacks along the western border (ETV Bharat, 2025; Stimson Center, 2025). On May 10, Pakistan launched Operation Bunyan-un-Marsoos, firing ballistic missiles, including the Fatah-II, and drones at multiple Indian air bases. Indian defenses intercepted most of these projectiles, though the precise numbers

remain contested (Stimson Center, 2025).

For present purposes, the most significant episode came in the final hours before the ceasefire. On May 10, Indian strikes hit Pakistan's Nur Khan airbase and reportedly targeted facilities near Sargodha. Several accounts suggested that the strikes reached locations near the Kirana Hills, an area long rumored to house elements of Pakistan's nuclear custodial infrastructure. The Indian Air Force's operations chief denied it, with a pointed joke about being grateful for the information that Kirana Hills housed nuclear installations (ThePrint, 2025a). Whether or not the strikes touched nuclear-associated facilities, Indian and Pakistani commentators read their proximity as a deliberate signal that even the custodial edges of the Pakistani arsenal were not sanctuaries (Sahgal & Sahu, 2026). At this point, Pakistani media reported that Prime Minister Shehbaz Sharif had convened the National Command Authority (The News Minute, 2025; Outlook Business, 2025). Within hours, Defence Minister Khawaja Asif denied that any such meeting had been called, and the ceasefire followed. U.S. diplomacy proved decisive in the final phase, in particular Secretary of State Marco Rubio's calls to the Pakistani leadership and Vice President J. D. Vance's to New Delhi (CNN, 2025).

Three features of the crisis matter for the argument. The first is the conspicuous absence of explicit nuclear signaling by Pakistan during the main phase of the conflict. In earlier crises, Pakistani officials had invoked the nuclear dimension early to force international attention. In 2025, Islamabad held that card back almost until the end (Council for Strategic and Defence Research & India's World, 2025, pp. 21–24). India's Chief of Defence Staff, General Anil Chauhan, later observed that "there is a lot of space before that nuclear threshold is crossed, a lot of signalling before that." He predicted that the space for conventional operations "will be the new norm" (DD News, 2025). Walter Ladwig, writing for the Royal United Services Institute, described the operation as "a calibrated use of force, intended to signal resolve, degrade terrorist infrastructure, and demonstrate capability, without crossing the line into broader war" (Ladwig, 2025a).

The second feature is the calibrated character of Indian operations. New Delhi's stated objective was the degradation of terrorist infrastructure, and Indian spokespersons insisted in the early phases that Pakistani military facilities were not being targeted (Press Information Bureau, Government of India, 2025). When Indian strikes did reach military installations, the government framed them as responses to Pakistani escalation rather than opening moves (Ladwig, 2025b). The effect was to place the onus of further escalation on Islamabad, and so to shrink the political space in which Pakistani decision-makers could reach for nuclear signaling without appearing to start the slide down Kahn's ladder (Stimson Center, 2025, pp. 28–33).

The third feature, and the most consequential, is that restraint was contingent. The Stimson Center's post-

crisis assessment concluded that the confrontation came closer to the edge than most early commentary allowed. Three factors held escalation in check: U.S. intervention, disciplined Indian targeting, and a cost-benefit calculation in Islamabad. Each was the product of specific choices under specific conditions rather than a structural feature of the dyad (Stimson Center, 2025). President Donald Trump's own remark that the United States had stopped what "could have been a bad nuclear war" may have been self-congratulation, but it captured how senior U.S. decision-makers perceived the final hours in real time (Newsweek, 2025).

Evaluating the Re-emergence of Battlefield Nuclear Use

What does the 2025 crisis reveal about the prospects for limited or battlefield nuclear employment in South Asia? Three conclusions seem warranted. None of them counsels complacency.

First, the non-use of TNWs in 2025 does not vindicate the claim that Pakistani deterrence is stable. It shows only that Pakistani decision-makers, under the particular conditions of May 2025, judged the marginal benefits of nuclear signaling too small. The risk was provoking the massive retaliation that Indian doctrine promises and that Indian officials have repeatedly reaffirmed. Those conditions included disciplined Indian targeting, a face-saving off-ramp through U.S. mediation, and the absence of any genuine threat to Pakistani territorial integrity (Das, 2025). In a future crisis where those conditions do not hold, an Indian incursion across the Line of Control in search of limited territorial gains, say, or a crisis that finds U.S. diplomatic capacity distracted elsewhere, Pakistani calculations could differ. The fighting stayed in the air, an exchange of missiles, drones, and stand-off strikes with no Indian ground thrust of the kind the Nasr was built to blunt. The crisis therefore never directly engaged the battlefield scenario at the heart of full-spectrum deterrence. The 2025 case is therefore a demanding test of Pakistani crisis behavior, but only a partial test of the tactical nuclear threshold itself. There is even an inverted reading on which full-spectrum deterrence succeeded in 2025: if India kept the war in the air precisely because a ground thrust risked engaging the tactical threshold, then the Nasr deterred something after all. The two readings are not exclusive, and both leave the location of the threshold, rather than its existence, as the thing the crisis did not reveal.

Second, the crisis has probably weakened the coercive value of Pakistani nuclear threats in the near term, and that weakening may itself create incentives for more dramatic nuclear signaling next time. If Islamabad concludes that ambiguity no longer generates the international pressure it once did, the temptation to raise the stakes explicitly, through overt Nasr deployment, public references to tactical options, or blunter threats, will grow. Army chief Field Marshal Asim Munir's remarks at a dinner in Tampa, Florida, in August 2025 read like an early

instance of exactly this dynamic. He said that "we are a nuclear nation, if we think we are going down, we'll take half the world down with us" (ThePrint, 2025b). There is a competing explanation, though. Pakistan's domestic narrative of the war is one of victory in the air, and a military confident of its conventional defenses has less need of nuclear noise; quieter signaling may reflect confidence as much as devaluation. The evidence so far does not separate the two.

Third, the operational logic of TNW employment remains as problematic as it was before the crisis. Any Pakistani decision to use a low-yield weapon presents two equally poor options. The first detonates the weapon on Pakistani territory, contaminating Pakistani soil and killing Pakistani civilians in a humanitarian catastrophe whose political costs Pakistan itself would bear. The second strikes Indian forces in motion, where the military value of interrupting an advance must be weighed against the near-certainty of massive Indian retaliation on Pakistani command, control, and population centers (Joshi, 2013; McCausland, 2015). The promises of centralized NCA control and managed escalation that underpin the declaratory version of FSD would come under severe stress in either case, and the command-and-control literature on delegated authority offers little comfort (Feaver, 1992). Pakistani critics of the Nasr have been making these points for more than a decade. The 2025 crisis gives no new grounds for dismissing them (Hoodbhoy, 2019; Hoodbhoy & Mian, 2014).

Taken together, these considerations suggest that the risk of battlefield nuclear employment in South Asia has not fallen. If anything, the picture is now more complicated. India has demonstrated that it can conduct substantial conventional operations beneath the nuclear threshold, which widens the arena in which future crises will play out. Pakistan has learned that nuclear ambiguity no longer automatically produces U.S. pressure on India, which cuts the diplomatic returns to its posture. Both sides have had an object lesson in how fast a crisis can move (Krepon & Thompson, 2013, pp. 21–27; Yusuf, 2018, pp. 168–176). The crisis has also added a threshold of its own: with the Indus Waters Treaty in abeyance, water is now a declared act-of-war issue for Islamabad, a sub-nuclear red line whose interaction with the nuclear one remains unexplored. These are not conditions under which one would confidently predict continued non-use. The policy implication is uncomfortable but plain: the machinery of restraint needs reinforcement while it still holds. The Directors General of Military Operations (DGMO) hotline that carried the ceasefire remains the only reliable military channel between the two states. The two National Command Authorities have no direct link to one another, and the crisis confirmed that third-party mediation cannot be assumed in advance. Building such channels is cheaper than betting that the next four-day war ends the way this one did.

CONCLUSION

The four-day war of May 2025 was the most severe test yet of the proposition that battlefield nuclear weapons furnish a usable rung on the South Asian escalation ladder, and it did not emerge strengthened. Pakistan's restraint was real, but restraint of this kind is a decision rather than a property of the arsenal. It followed from disciplined Indian targeting, an available off-ramp, and the absence of any threat to Pakistani territorial integrity, none of which is guaranteed to recur. The crisis showed that Pakistani decision-makers can decline the tactical option under stress, and nothing about where the threshold lies. The operational dilemma is unchanged: a low-yield weapon used on Pakistani soil imposes catastrophe on Pakistani civilians, while the same weapon used against advancing forces invites wholly disproportionate retaliation. The interpretation rests on one case without archival access, and no ground offensive staged the scenario for which the tactical arsenal was built. Comparative work across the post-1998 crises would test it. Restraint in May 2025 depended on one military hotline and a distracted external power. A direct channel between the two national command authorities should be built before the next crisis rather than improvised during it.

REFERENCES

- Ahmed, A. (2014). *India's doctrine puzzle: Limiting war in South Asia*. Routledge. <https://openlibrary.org/works/OL21070457W>
- Ahmed, M. (2016, June 30). Pakistan's tactical nuclear weapons and their impact on stability. *Carnegie Endowment for International Peace*. <https://carnegieendowment.org/research/2016/06/pakistans-tactical-nuclear-weapons-and-their-impact-on-stability>
- Akhtar, R. (2023, October). *Pakistan's evolving nuclear doctrine*. *Arms Control Today*. <https://www.armscontrol.org/act/2023-10/features/pakistans-evolving-nuclear-doctrine>
- Al Jazeera. (2025a, May 7). *Operation Sindoor: What's the significance of India's Pakistan targets?* <https://www.aljazeera.com/news/2025/5/7/operation-sindoor-whats-the-significance-of-indias-pakistan-targets>
- Al Jazeera. (2025b, May 7). *Why did India strike Pakistan? All we know about Operation Sindoor*. <https://www.aljazeera.com/news/2025/5/7/why-did-india-strike-pakistan-all-we-know-about-operation-sindoor>
- Basrur, R. M. (2006). *Minimum deterrence and India's nuclear security*. Stanford University Press. <https://openlibrary.org/works/OL5829539W>
- Brodie, B. (Ed.). (1946). *The absolute weapon: Atomic power and world order*. Harcourt, Brace. <https://openlibrary.org/works/OL89433W>
- Business Today. (2025, May 15). Nuclear weapons not safe with Pakistan, should be under IAEA supervision: Rajnath Singh in Srinagar. <https://www.businesstoday.in/india/story/nuclear-weapons-not-safe-with-pakistan-should-be-under-iaea-supervision-rajnath-singh-in-srinagar-476385-2025-05-15>
- Carnegie Endowment for International Peace. (2015, March 23). A conversation with Gen. Khalid Kidwai [Transcript]. *Carnegie International Nuclear Policy Conference*. <https://carnegieendowment.org/files/03-230315carnegieKIDWAI.pdf>
- Center for Strategic and International Studies. (2024). Nasr (Hatf 9). *Missile Threat*. <https://missilethreat.csis.org/missile/hatf-9/>
- Clary, C. (2013). Deterrence stability and the conventional balance of forces in South Asia. In M. Krepon & J. Thompson (Eds.), *Deterrence stability and escalation control in South Asia* (pp. 135–160). Stimson Center. https://www.files.ethz.ch/isn/175015/Deterrence_Stability_Dec_2013_web.pdf
- Clary, C., & Narang, V. (2019). India's counterforce temptations: Strategic dilemmas, doctrine, and capabilities. *International Security*, 43(3), 7–52. https://doi.org/10.1162/isec_a_00340
- CNN. (2025, May 10). *Vance called Indian prime minister to encourage ceasefire talks after receiving alarming intelligence, sources say*. <https://www.cnn.com/2025/05/10/politics/vance-modi-india-pakistan-intelligence>
- Council for Strategic and Defence Research, & India's World. (2025, July). *Operation Sindoor and India's new doctrine of deterrence*. https://indiasworld.in/wp-content/uploads/2025/07/Op-Sindoor-E-Book_CSDR_IW_2025.pdf
- Dalton, T., & Krepon, M. (2015). *A normal nuclear Pakistan*. Stimson Center & Carnegie Endowment for International Peace. <https://carnegieendowment.org/files/NormalNuclearPakistan.pdf>
- Das, D. (2025, November 29). *The illusion of deterrence: Why India isn't buying Pakistan's nuclear threats*. Bulletin of the Atomic Scientists. <https://thebulletin.org/2025/11/the-illusion-of-deterrence-why-india-isnt-buying-pakistans-nuclear-threats/>
- DD News. (2025, July). *India will not be deterred by nuclear blackmail: CDS General Anil Chauhan*. <https://ddnews.gov.in/en/india-will-not-be-deterred-by-nuclear-blackmail-cds-general-anil-chauhan/>
- ETV Bharat. (2025, May 26). *413 drone attacks, zero casualties: How India's defence system foiled Pakistan offensive along western border*. <https://www.etvbharat.com/en/bharat/413-drone-attacks-zero-casualties-how-indias-defence-system-foiled-pakistan-offensive-along-western-border-enn25052602787>
- Fearon, J. D. (1997). Signaling foreign policy interests: Tying hands versus sinking costs. *Journal of Conflict Resolution*, 41(1), 68–90. <https://doi.org/10.1177/0022002797041001004>
- Feaver, P. D. (1992). Command and control in emerging nuclear nations. *International Security*, 17(3), 160–187. <https://doi.org/10.2307/2539133>
- Fravel, M. T., & Medeiros, E. S. (2010). China's search for assured retaliation: The evolution of Chinese nuclear strategy and force structure. *International Security*, 35(2), 48–87. https://doi.org/10.1162/isec_a_00016

- Freedman, L., & Michaels, J. (2019). *The evolution of nuclear strategy* (4th ed.). Palgrave Macmillan. <https://openlibrary.org/works/OL76945W>
- Futter, A., & Zala, B. (2021). Strategic non-nuclear weapons and the onset of a third nuclear age. *European Journal of International Security*, 6(3), 257–277. <https://doi.org/10.1017/eis.2021.2>
- Ganguly, S., & Hagerty, D. T. (2005). *Fearful symmetry: India-Pakistan crises in the shadow of nuclear weapons*. University of Washington Press. <https://openlibrary.org/works/OL21225810W>
- Hoodbhoy, P. (2019, October 12). *Beware the nuclear con man*. Dawn. <https://www.dawn.com/news/1507802>
- Hoodbhoy, P., & Mian, Z. (2014). Nuclear fears, hopes and realities in Pakistan. *International Affairs*, 90(5), 1125–1142. <https://sgs.princeton.edu/sites/default/files/2020-01/hoodbhoy-mian-2014.pdf>
- Inter-Services Public Relations. (2011, April 19). Press release no. PR94/2011-ISPR [Press release]. Government of Pakistan.
- Jervis, R. (1989). *The meaning of the nuclear revolution: Statecraft and the prospect of Armageddon*. Cornell University Press. <https://openlibrary.org/works/OL2620296W>
- Joshi, S. (2013). Pakistan's tactical nuclear nightmare: Déjà vu? *The Washington Quarterly*, 36(3), 159–172. <https://doi.org/10.1080/0163660X.2013.825557>
- Kahn, H. (1965). *On escalation: Metaphors and scenarios*. Praeger. <https://openlibrary.org/works/OL5255272W>
- Kampani, G. (2014). New Delhi's long nuclear journey: How secrecy and institutional roadblocks delayed India's weaponization. *International Security*, 38(4), 79–114. https://doi.org/10.1162/isec_a_00158
- Kapur, S. P. (2007). *Dangerous deterrent: Nuclear weapons proliferation and conflict in South Asia*. Stanford University Press. <https://openlibrary.org/works/OL8444380W>
- Khan, F. H. (2012). *Eating grass: The making of the Pakistani bomb*. Stanford University Press. <https://openlibrary.org/works/OL16626954W>
- Khan, Z. (2015). *Pakistan's nuclear policy: A minimum credible deterrence*. Routledge. <https://openlibrary.org/works/OL21266664W>
- Kidwai, K. (2020, February 6). *Keynote address [Conference presentation]*. IISS–CISS Workshop on South Asian Strategic Stability, London, United Kingdom. <https://www.iiss.org/globalassets/media-library---content--migration/files/research-papers/nuclear-deterrence-and-stability-in-south-asia---perceptions-and-realities.pdf>
- Krepon, M., & Thompson, J. (Eds.). (2013). *Deterrence stability and escalation control in South Asia*. Stimson Center. https://www.files.ethz.ch/isn/175015/Deterrence_Stability_Dec_2013_web.pdf
- Kristensen, H. M., Korda, M., Johns, E., & Knight-Boyle, M. (2025). Pakistan nuclear weapons, 2025. *Bulletin of the Atomic Scientists*, 81(5), 386–408. <https://doi.org/10.1080/00963402.2025.2543685>
- Ladwig, W. C., III. (2025a, May). *Calibrated force: Operation Sindoor and the future of Indian deterrence* [Commentary]. Royal United Services Institute. <https://www.rusi.org/explore-our-research/publications/commentary/calibrated-force-operation-sindoor-and-future-indian-deterrence>
- Ladwig, W. C., III. (2025b, May). *Operation Sindoor and the evolution of India's military strategy against Pakistan*. War on the Rocks. <https://warontherocks.com/2025/05/operation-sindoor-and-the-evolution-of-indias-strategy-against-pakistan/>
- Lieber, K. A., & Press, D. G. (2017). The new era of counterforce: Technological change and the future of nuclear deterrence. *International Security*, 41(4), 9–49. https://doi.org/10.1162/isec_a_00273
- Long, A. (2008). *Deterrence: From Cold War to long war*. RAND Corporation. <https://www.rand.org/pubs/monographs/MG636.html>
- McCausland, J. D. (2015, March 10). *Pakistan's tactical nuclear weapons: Operational myths and realities*. Stimson Center. <https://www.stimson.org/2015/pakistans-tactical-nuclear-weapons-operational-myths-and-realities/>
- Ministry of External Affairs, Government of India. (2025a, April 23). *Transcript of special briefing by Foreign Secretary*. <https://www.mea.gov.in/media-briefings.htm>
- Ministry of External Affairs, Government of India. (2025b, May 7). *Transcript of special briefing on Operation Sindoor*. <https://www.mea.gov.in/media-briefings.htm>
- Narang, V. (2010). Posturing for peace? Pakistan's nuclear postures and South Asian stability. *International Security*, 34(3), 38–78. <https://doi.org/10.1162/isec.2010.34.3.38>
- Narang, V. (2014). *Nuclear strategy in the modern era: Regional powers and international conflict*. Princeton University Press. <https://openlibrary.org/works/OL20349569W>
- National Security Advisory Board. (1999, August 17). *Draft report on Indian nuclear doctrine*. Government of India. <https://nuke.fas.org/guide/india/doctrine/990817-indnucl.htm>
- The News Minute. (2025, May 10). *Reuters report says Pak PM convened meeting of body overseeing nuclear arsenal*. <https://www.thenewsminute.com/news/reuters-report-says-pak-pm-convened-meeting-of-body-overseeing-nuclear-arsenal>
- Newsweek. (2025, May 12). *Trump on India-Pakistan: We stopped “a bad nuclear war.”* <https://www.newsweek.com/trump-india-pakistan-we-stopped-bad-nuclear-war-2070976>
- Outlook Business. (2025, May). *Pakistan denies convening Nuclear Command Authority meeting amid tensions with India*. <https://www.outlookbusiness.com/news/pakistan-denies-convening-nuclear-command-authority-meeting-amid-tensions-with-india>
- Panag, H. S. (2025, May). *India inflicted a psychological defeat on Pakistan—by the skin of its teeth*. ThePrint.

- <https://theprint.in/opinion/india-inflicted-a-psychological-defeat-on-pakistan-by-the-skin-of-its-teeth/2626200/>
- Peri, D. (2025, October 6). Military lessons from Operation Sindoor. *Carnegie Endowment for International Peace*. <https://carnegieendowment.org/research/2025/10/military-lessons-from-operation-sindoor>
- Press Information Bureau, Government of India. (2025, May 14). *Operation Sindoor: India's strategic clarity and calculated force* [Press release]. <https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=2128748>
- Prime Minister's Office, Government of India. (2003, January 4). *The Cabinet Committee on Security reviews operationalization of India's nuclear doctrine* [Press release]. <https://archive.pib.gov.in/archive/releases98/lyr2003/rjan2003/04012003/r040120033.html>
- Prime Minister's Office, Government of Pakistan. (2025, April 24). *Prime Minister chairs meeting of the National Security Committee* [Press release]. <https://pmo.gov.pk/>
- Rajagopalan, R. (2016, June 30). *India's nuclear doctrine debate*. *Carnegie Endowment for International Peace*. <https://carnegieendowment.org/research/2016/06/indias-nuclear-doctrine-debate>
- Rej, A. (2019, August). *Is India "creatively reinterpreting" its no-first-use policy?* Bulletin of the Atomic Scientists. <https://thebulletin.org/2019/08/is-india-creatively-reinterpreting-its-no-first-use-policy/>
- Roberts, B. (2016). *The case for U.S. nuclear weapons in the 21st century*. Stanford University Press. <https://openlibrary.org/works/OL20311972W>
- Sahgal, A., & Sahu, A. (2026). *Operation Sindoor establishes India's new response doctrine towards Pakistan*. *British American Security Information Council*. <https://basicint.org/operation-sindoor-establishes-indias-new-response-doctrine-towards-pakistan/>
- Saleem, F. (2025, May 11). *The 87-hour war: \$1 billion an hour*. *The News International*. <https://www.thenews.com.pk/print/1310466-the-87-hour-war-1-billion-an-hour>
- Salik, N. (2009). *The genesis of South Asian nuclear deterrence: Pakistan's perspective*. Oxford University Press. <https://openlibrary.org/works/OL15029754W>
- Salik, N. (2016, June 30). *Pakistan's nuclear force structure in 2025*. *Carnegie Endowment for International Peace*. <https://carnegieendowment.org/research/2016/06/pakistans-nuclear-force-structure-in-2025>
- Saran, S. (2013, April 24). *Is India's nuclear deterrent credible?* [Address]. India Habitat Centre, New Delhi, India. <https://capssindia.org/wp-content/uploads/2022/09/Shyam-Saran.pdf>
- Saxena, A. (2026, March). *India's drone strategy in Operation Sindoor*. In *Operation Sindoor: Military performance and effectiveness* (ORF Special Report No. 299). Observer Research Foundation. <https://www.orfonline.org/research/operation-sindoor-military-performance-and-effectiveness>
- Schelling, T. C. (1966). *Arms and influence*. Yale University Press. <https://openlibrary.org/works/OL2259854W>
- Snyder, G. H. (1965). The balance of power and the balance of terror. In P. Seabury (Ed.), *The balance of power* (pp. 184–201). Chandler. <https://openlibrary.org/works/OL4652544W>
- Stimson Center. (2025, May 28). *Four days in May: The India-Pakistan crisis of 2025*. <https://www.stimson.org/2025/four-days-in-may-the-india-pakistan-crisis-of-2025/>
- Tannenwald, N. (1999). The nuclear taboo: The United States and the normative basis of nuclear non-use. *International Organization*, 53(3), 433–468. <https://doi.org/10.1162/002081899550959>
- Tasleem, S. (2016, June 30). *Pakistan's nuclear use doctrine*. *Carnegie Endowment for International Peace*. <https://carnegieendowment.org/research/2016/06/pakistans-nuclear-use-doctrine>
- Tellis, A. J. (2001). *India's emerging nuclear posture: Between recessed deterrent and ready arsenal*. RAND Corporation. https://www.rand.org/pubs/monograph_reports/MR1127.html
- ThePrint. (2019, August 16). *India committed to no first use nuke policy, but "future depends on circumstances": Rajnath*. <https://theprint.in/defence/india-committed-to-no-first-use-uke-policy-but-future-depends-on-circumstances-rajnath/277860/>
- ThePrint. (2025a, May). *Did India hit "nuke storage" facility in Pakistan's Kirana Hills? Here's what IAF ops chief said*. <https://theprint.in/defence/did-india-hit-nuke-storage-facility-in-pakistans-kirana-hills-heres-what-iaf-officer-said/2623385/>
- ThePrint. (2025b, August 11). *Pakistan Army chief Asim Munir's nuclear remarks in Florida spark controversy*. <https://theprint.in/world/pakistan-army-chief-field-marshal-asim-munir-florida-speech-nuclear-threat-india/2718095/>
- U.S. Department of State. (2025, May 10). *Announcing a U.S.-brokered ceasefire between India and Pakistan* [Press release]. <https://www.state.gov/releases/office-of-the-spokesperson/2025/05/announcing-a-u-s-brokered-ceasefire-between-india-and-pakistan>
- Yost, D. S. (2011). The US debate on NATO nuclear deterrence. *International Affairs*, 87(6), 1401–1438. <https://doi.org/10.1111/j.1468-2346.2011.01043.x>
- Yusuf, M. (2018). *Brokering peace in nuclear environments: U.S. crisis management in South Asia*. Stanford University Press. <https://openlibrary.org/works/OL21315167W>