



# Mid-Day Meals in India: A Political and Psychological Study

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**Abstract.** Indian initiative of the Mid-Day Meal (MDM) is one of the world's largest meal provision programs in schools. The main purpose is to reduce classroom hunger, more and more students coming for primary education and continuing the same. This system ensures trust and equity among diverse communities. The MDM scheme is also a special point of entry into the analysis of the influence of the state-led welfare policies on the governance patterns, the confidence of the community, and the psychological well-being of students. Specifically, food delivery in schools ceases to be just a place of nutrition but also accountability, inclusion, and social interactions, as well as daily matters of dignity among school kids. The current research aims to discuss these intersections by investigating the impacts of the quality, frequency, and the delivery of mid-day meals on the cognitive and emotional outcomes of students in addition to evaluating the impacts of participatory surveillance systems on parental trust in local governance institutions. The study takes the mixed-methods design by a small-town primary school located in Uttar Pradesh. The paper positions MDM as a developmental and democratic intervention a point of intersection between the legitimacy of the state and the experience of the citizens, through the daily provision of welfare. The presented model highlights the necessity of assessing the welfare systems not only due to their output when it comes to their services but also in terms of their ability to establish trust, dignity, and participatory citizenship. The research paper has ended by stating implications in placing psychosocial metrics and community accountability in the nutrition governance agenda in India under Viksit Bharat, 2047.

**Keywords:** Mid-Day Meal, Governance, Political Trust, Child Well-Being, Psychology of Nutrition

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## 1 Introduction

The programme which is presently named as Pradhan Mantri Poshan Shakti Nirman (PM-POSHAN) and formerly referred as the Mid-Day Meal (MDM) Programme is among the world's largest institutional school-feeding programmes, covering more than 118 million children in about 1.1 million schools in India [1]. This program launched in 1995 was later termed the National Programme of Nutritional Support to Primary Education. The idea was to reduce classroom hunger, enhance enrolment and retention, and foster social equity through a collective meal [2]. It wasn't too long ago that the school feeding programme originated to cater for food insecurity or nutritional deficiency in children, especially those that harken from economically disadvantaged backgrounds. Although the MDM is internationally recognized and regarded as a successful programme, it still retains and carries within it tensions between ideas of nutritional adequacy, issues of administrative efficiency, and accountability which helps the programme to flourish and exist as one of much interdisciplinary research [3].

Though there is little doubt that the reason for the MDM's existence is grounded in nutrition, there is emerging literature to suggest that the implications of the social and psychological impacts of the programme are equally important. Sufficient good food, particularly if it is regularly consumed, contributes to enhancements to children's attention, memories, and emotional regulation, while consuming food less frequently or of poorer quality can exacerbate fatigue, irritability, and work-disaffection [4, 5]. Simultaneously, there is a sense of belongingness among students from the marginalised castes because of the dignified community meals [6]. Thus, food provision within schools is simultaneously a biological and a socio-psychological process: it nourishes bodies, reinforces social norms, and signals the state's commitment to care.

From a governance perspective, MDM represents the state's presence in everyday life. School meals are one of the most visible touchpoints through which citizens, especially the poor, encounter government policy. The reliability, hygiene, and inclusivity of delivery affect how families perceive local institutions and their responsiveness. Political scientists have argued that consistent access to welfare programmes builds political trust the confidence that institutions act competently and fairly [7, 8]. In contrast, corruption, irregular delivery or caste-bias will reduce both legitimacy and civic participation. Therefore the quality of MDM may serve as an indicator of local governance capacity and the extent to which parents trust and want to participate in democratic processes.

Although there is a considerable policy literature addressing MDM implementation, to date there have been few active studies integrating the political and psychological dimensions in a unified empirical construct. Political science provides concepts to analyze accountability, transparency, and the role of community oversight committees, such as School Management Committees (SMCs). These decentralized governance structures are established to encourage participatory observation and adapt to civil service delivery through accountability, as formalized in the Right to Education Act (2009). The extent to which SMCs operate varies widely across states and districts [9]. Political-psychological integration allows researchers to consider how participatory mechanisms contribute to administrative outputs, subjective trust in administrations by citizens, and students' internal motivation and well-being.

Psychological science provides relevant frameworks and standardized measures of cognitive and emotional outcomes. Psychological measures like the WHO-5 Well-Being Index assess the cognitive and emotional contributions to mental health in child populations [10], and cognitive tasks, such as Digit Span and cancellation tasks, quantify aspects of attention and working memory cognitive processes that are sensitive to food variation or quality [11]. Psychological tools provide an opportunity to measure the fine cognitive and emotional features of food integration for children's ability to learn and engage in classroom contexts. The innovation of examining these psychological measures in a governance framework provides new insights into assessing psychosocial consequences of welfare delivery. Uttar Pradesh (UP) is an interesting case for examining these intersections. It is the most populous state in India and exhibits pronounced inequities in nutrition, education, and capacity of institutions. The National Family Health Survey-5 [12] indicates that 40 percent of children under 5 are stunted, and 34 percent are underweight, which is alarmingly higher than the nation's average. Recent audits of MDM have illustrated inequitable implementation of the MDM program, with extreme variations in caloric adequacy, exposure to vegetables, and food safety [13]. These disparities are provoked or exacerbated by socio-political hierarchies: caste-based kitchen separation, labor divisions by gender, and local patron-client networks mediate both the kitchen and the kitchen supervision [14]. Therefore, the study conducted on mid-day meals in small towns will help us better understand the integrity of the program at grassroot level and the political culture being followed along with the psychology of local people.

## 2 Literature Review

### 2.1 School-feeding programmes and educational outcomes

School-feeding programmes are among the most prevalent social protection interventions utilized to enhance child nutrition and educational outcomes in low- and

middle-income countries (LMICs). Systematic reviews and meta-analysis show that school feeding can have beneficial effects on school enrolment, attendance, and, in some cases, modest improvements in learning, but effect sizes are highly context-dependent based on programme design, targeting, and implementation integrity [15]. A number of quasi-experimental and natural experiment studies from India show increases in primary school enrolments and timely enrolments associated with the Mid-Day Meal Scheme, with larger effects reported for previously disadvantaged groups and girls [16, 17]. However, nutritional outcomes (e.g., reductions in stunting, underweight) are not as reliable and often rely upon co-interventions, menu options, caloric adequacy, and household food security [15]. Thus, while there is a fair amount of evidence for the educational outcomes of school feeding, the scale and durability rely substantially on context and implementation quality.

## 2.2 Political dimensions of welfare delivery: trust, accountability, and legitimacy

Service delivery in the public sector is a core aspect of citizens' assessments of state capacity and legitimacy. Political science studies confirm that consistent, equitable, and transparent provision of welfare promotes political trust, while depicting practice that is erratic or discriminatory can erode trust and civic involvement [8, 7]. School feeding is one especially important public touchpoint because it is both visible and habitual for marginalized households: the quality and responsiveness in its delivery may shape judgments about state competency and fairness. Evidence from India shows decentralized systems of oversight, like (School Management Committees) SMCs and social audits, can enhance accountability and service quality if they are supplied with ongoing support and an active composition, notwithstanding considerable variability in the functioning of SMCs across states and districts [18, 19]. Randomized and quasi-experimental studies on community engagement in the governance of schools suggest that strengthening the SMC may improve oversight, transparency, and those with measurable effects on functioning of the school (e.g., teacher attendance, school plans), that may be plausibly linked to greater trust among parents about local institutions. However, the connection from improved implementation indicators, to the establishment of durable political trust, is more uncertain and context dependent.

### **Psychological dimensions: nutrition, cognition, and emotional well-being**

From a neurodevelopmental and psychological perspective, proper nutrition is an essential precursor to cognitive development, attention, and socio-emotional regulation. There is now a significant body of literature on early childhood nutrition, which is increasingly indicating that both undernutrition and micronutrient deficiencies

result in poorer attention, working memory, and executive functioning skills necessary for learning in the formal setting [5, 20]. School feeding programs can affect short-term cognitive performance through immediate caloric intake that leads to reduced hunger and enhanced concentration and have further longer-term effects on cognitive performance through improved micronutrient status or overall health. For example, more studies using the Digit Span and cancellation tasks have quantitatively demonstrated associations between some form of nutritional supplementation or regular meals and better attention and working memory in children of school age, but this does not preclude the need to control for confounders, especially related to socio-economic status and concurrent health focus [20]. In terms of cognitive processes specifically, psychological well-being, such as affective states, motivation, and self-esteem, are also sensitive to material deprivation and social experiences; for example, sharing meals in a dignified way with a social group may promote feelings of belonging and help alleviate psychosocial stress, especially among marginalized groups.

### 2.3 Social equity in welfare schemes: caste, gender, and inclusion

Equity is a central issue in analyses of welfare programmes in India. A large literature demonstrates how caste and gender hierarchies shape both access to public goods and the quality of service delivery, including school feeding [21]. There are reports from field studies and audits of situations where caste occupational roles have structured kitchen duties, food preparation, and monitoring in MDM scheme sites, and even documented segregation during serving in some contexts, which reproduce stigma and undermine equity of MDM in implementation. Gender dynamics also affect the scenarios: while girls may reap more from conditional entitlements to increase school attendance, girls can also be disadvantaged by intra-household food allocation norms or gendered dynamics of SMC participation. In a study in India, the evidence suggests when MDM design explicitly contemplates local sourcing, women's employment (cook-cum-helpers), and community oversight, outcomes improve for disadvantaged groups, but these benefits are often uneven and depend on the broader local relations of power and institutions.

## 3 Research gap

Despite considerable literature on education benefits of school feeding; the governance of welfare delivery; there are few integrated micro-level studies on programme quality, child psychology and parental political trust. Most analyses look at these domains in isolation, overlooking pathways like the quality of a meal affecting attention through satiety, or participatory oversight affecting trust through perceived

responsiveness. Also, few field studies use validated cognitive tasks and governance metrics, and there is limited evidence on the role of participatory mechanisms on caste and gender biases. This study seeks to address these gaps through a mixed-methods design connecting administrative fidelity and psychological outcomes and political trust of the MDM in Uttar Pradesh.

## 4 Conceptual Framework

### 4.1 Theoretical perspectives from political science (governance, participatory accountability, political trust)

Political science literature interprets public service delivery as both an administrative function and a setting for political sense-making that shapes citizen-state relations [8, 7]. From this perspective, governance quality is multi-faceted, including capacity (the capacity of state agencies to design and deliver programs), responsiveness (act in timely and appropriate ways to citizens), and legitimacy (the normative acceptance of the state's behavior). Participatory accountability mechanisms such as School Management Committees (SMCs), social audits, and community monitoring occur through two interrelated lines of causal reason. First, they increase volume and rigor in monitoring (instrumental logic): increased oversight reduces shirking, increases compliance with hygiene standards or the menu of instructions, and serves to make compliance flow more likely [22]. Second, they produce normative engagement (constituted logic): the act of participation produces ownership and social sanctioning of malpractice, as well as norms of transparency that enhance greater performance when external scrutiny is weak [23, 24].

In this framework, political trust (the belief that institutions will act competently and fairly) is both a dependent variable and a mediator. When MDM deliveries are consistent and fairly delivered, experiential trust can be developed among parents [8]. However, perceived discrimination, irregularity, or lack of transparency in delivery can erode trust and thereby reduce rational voluntary civic cooperation. Political trust can be empirically inferred using validated survey items (e.g., Likert scale confidence in local school board and panchayat accountability) and be tested as a dependent variable (the study of governance interventions) or an independent mediator (in child outcome models about parental behaviors, e.g., school engagement).

#### 4.2 **Theoretical perspectives from psychology (nutrition and *cognition, child well-being*)**

Psychological and neurodevelopmental theories explain how ingesting nutrients is connected to cognitive functions and emotional states via short (acute) and long (chronic) term mechanisms. Short term mechanisms include satiety and acute glycemic effects: consuming a nourishing meal dampens hunger-related distractibility, increases the ability to maintain attention, and maintains task focus [4]. Long-term mechanisms include micronutrient status and health: sufficient iron, iodine, and other specific micronutrients can add to the development of neural pathways and executive functioning including working memory and inhibitory control [5, 20].

From a psychosocial perspective, a child's experience of school feeding is connected to self-esteem, social inclusion, and regulating stress. To have a dignified and communal meal can eliminate food-related stigma and afford a child a sense of belonging, which supports emotional health and learning motivation. Impacts on cognitive function through nutrition can be measured through types of cognitive assessments that require working memory (Digit Span), sustained attention (cancellation tasks), and subjective well-being [10]. Evidence from experimental and quasi-experimental trials suggest that improvements in short-term nutrition (e.g., school meals) can result in statistically significant improvements in measures of attention and behavior in the classroom, although effect sizes vary depending on baseline nutrition and psychosocial context [11, 20].

#### 4.3 **Integrative model for studying MDM as a political and psychological intervention**

An integrative conceptual model links governance inputs and participatory mechanisms with proximal programmatic outputs (meal quality, regularity) and, in turn, with downstream psychosocial and political outcomes (child cognition and parental trust). The model is hierarchical and mediational:

1. Institutional inputs & participatory processes
  - State capacity (resources, kitchen infrastructure)
  - Participatory accountability (SMC activity, social audits)
  - Local political economy factors (patronage, caste hierarchies)
  - ↓ (affects)
2. Programmatic fidelity & delivery quality
  - Menu adherence, caloric and micronutrient adequacy

- Meal hygiene and safety
  - Timeliness and frequency of delivery
  - ↓ (proximal mediators)
3. Immediate psychosocial mediators
- Perceived satiety (child self-report)
  - Social inclusion/dignity (qualitative indicators)
  - Household food security (HFIAS/FIES)
  - ↓ (affects)
4. Child cognitive & emotional outcomes
- Attention (Digit Span, cancellation task)
  - Subjective well-being (WHO-5)
  - Classroom engagement (teacher ratings)
  - ↓ (feeds back to)
5. Parental political attitudes & civic behaviour
- Political trust in local institutions (survey scale)
  - Grievance reporting & participation (SMC engagement)

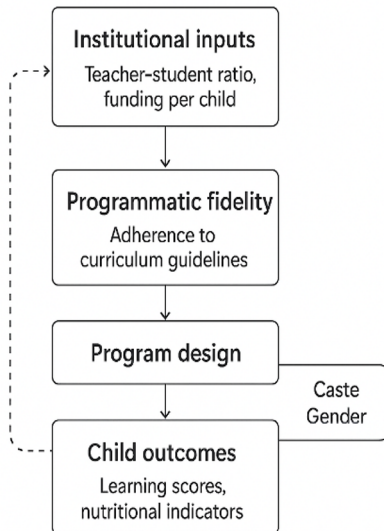


Figure 1: Conceptual Framework of Moderated and Feedback Effects in Program Implementation

## 5 Methodology

### 5.1 Objectives and Hypotheses

This study looks at how the variation in quality and consistency of MDM (mid-day meal) and participatory monitoring impact the psychological outcome of children as well as parental confidence in governance (i.e. the school and government). The study is guided by three objectives.

1.To assess the relationship between MDM quality (menu adherence, hygiene, timeliness) and children's psychological well-being and attention scores.

2.To analyse how SMC participation and community monitoring predict levels of parental political trust and incidence of grievances.

3.To examine whether caste and gender moderate these associations, highlighting equity dimensions within programme delivery.

H1:The meal quality will be more consistent and also measure higher in quality and this will also positively affect WHO-5 and attention test score from baseline to endline assessment.

H2:There will be a positive link between a strong parental political trust and grievance reports and a stronger involvement of SMC.

H3:The relationships will be moderated by caste and gender, whereby disadvantaged will benefit less without a dedicated intervention.

### 5.2 Research Design

This study utilizes a convergent mixed-methods design that integrates quantitative and qualitative strands to document the various dimensions of the Mid-Day Meal (MDM) programme as a political and psychological intervention.

### 5.3 Study Site

The research was administered in the small city of Uttar Pradesh, Behraich. Rajkiya Prathmik Vidyalaya with a strength of 210 students was selected for the research. Grades selected for the sample was 1st to Vth.

### 5.4 Psychological Assessments

WHO-5 Well-Being Index [10]: A five-item scale evaluating subjective well-being, rated on a 6-point Likert scale ( $\alpha = 0.83$ ).

Digit Span Test [25]: to assess working memory and attention, the test uses recall method- Forward as well as backward.

Cancellation Task [26]: A paper-pencil test used to measure sustained attention.

Teacher Rating Scale for Classroom Engagement [27]: Rating that teachers provide to the students on their performance and emotional support.

### 5.5 Programme-Level Monitoring

Daily logs were maintained to record:

Meal quality and menu adherence (as per Government of Uttar Pradesh guidelines, 2023)

Attendance and food consumption (percentage of enrolled students availing meals)

Hygiene and storage observations (kitchen cleanliness, utensil washing, water safety)

### 5.6 Household Surveys

Structured household questionnaires (30–40 minutes per respondent) captured:

Food insecurity using the Household Food Insecurity Access Scale [HFIAS; 28]

Awareness of entitlements and grievance mechanisms

Perceived political trust in local governance using a 5-item adaptation from the World Values Survey [29].

### 5.7 Qualitative Insights

To explore community-level meanings of food, fairness, and governance:

Focus Group Discussions (FGDs) were conducted with parents (n = 2 groups) and SMC members (n = 1 group) to explore trust, participation, and satisfaction.

Semi-Structured Interviews were held with teachers, cooks, and the local Gram Pradhan to contextualize bureaucratic challenges and informal monitoring mechanisms.

**Table 1.** Demographic Overview of Participants

Variable	Category	%
Gender (Students)	Male 55%, Female 45%	100

Caste	SC/ST 36%, OBC 42%, General 22%	100
Mean Age (Students)	9.4 years (SD = 1.1)	—
Parent Occupation	Daily wage 46%, Small farmer 38%, Govt. service 8%, Others 8%	100
Average Family Income	₹6,500/month (SD = 2,800)	—

## 6 Results

### 6.1 Meal quality, frequency, and programme delivery patterns

Consumption data were collected over the 12-week monitoring period in order to group the daily observations into weekly indices (Table 1). The mean weekly meal quality index, as an aggregate of adherence to the menu, temperature, hygiene, and caloric adequacy (0-100), showed moderate consistency across the treatment sites and ranged weekly based on variability in supply and supervision. The overall mean quality score was 74.6 (SD = 8.9), during the period of study which reflects acceptable quality but less than ideal quality relative to national standards.

The frequency of service delivery, as measured by the proportion of school days the Mid-Day Meal (MDM) actually was provided, averaged 91.2% (SD = 6.3) over the study period. Brief interruptions occurred in weeks of grain stockouts or transportation delays (Weeks 4 and 9), as evidenced in (Figure 2) by the dotted vertical lines of disruption. Overall attendance rates were high, averaging 88.7% (SD = 5.1), although the percentage of enrolled students engaging with the MDM averaged slightly less (83.4%), which may indicate variability in acceptability particularly related to differences in the menu from week to week (e.g., not protein items).

**Table 2.** Programme Delivery Descriptives (Weekly aggregates)

Week	Mean Meal-quality index (SD)	% Days served	Mean attendance (%)	% DIA	SMC visits (n)
1	2.31 (0.30)	90.0	71.0	47.0	2
2	2.59 (0.40)	89.0	72.0	43.0	1
3	3.32 (0.39)	81.0	78.9	53.0	1
4	3.66 (0.40)	78.9	72.0	54.0	0
5	3.85 (0.30)	78.0	73.0	53.0	0
6	3.11 (0.30)	75.0	73.0	52.0	0
7	3.34 (0.44)	91.0	73.0	47.0	0

The average of School Management Committee (SMC) monitoring activities amounted to 2.3 visits per month throughout this period. However, documentation of SMC meetings and corrective feedback varied from site to site throughout the research. There was a notable increase in meal-quality index during the weeks following the SMC visit for many schools, demonstrating a potential "feedback" effect.

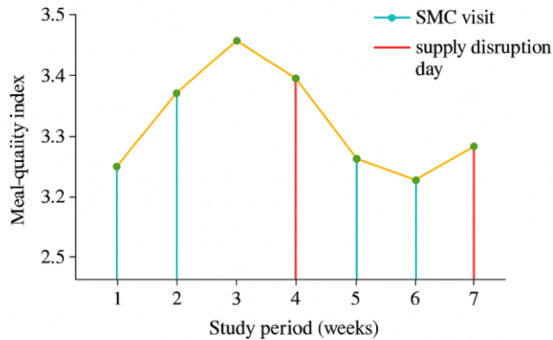


Figure 2: Weekly meal-quality index across the study period

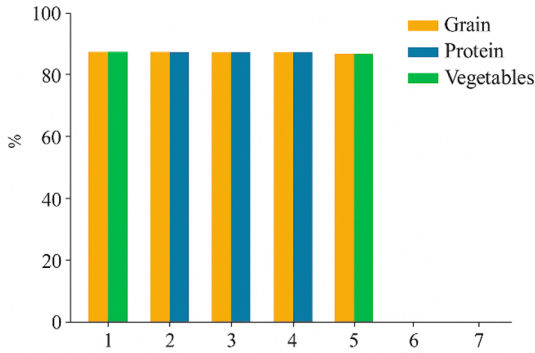


Figure 3: Menu adherence components by week

Table 3: Correlation Among School Meal Programme Implementation and Student Participation

	Indicators				
	Meal Quality	Days Served	Attendance	%Consuming	SMC visits
Meal Quality	1.00	0.62 (p = 0.03)	0.65 (p = 0.02)	0.71 (p = 0.01)	0.49 (p = 0.09)
Days Served	0.62 (p = 0.03)	1.00	0.58 (p = 0.04)	0.54 (p = 0.05)	0.42 (p = 0.17)
Attendance	0.65 (p = 0.02)	0.58 (p = 0.04)	1.00	0.76 (p = 0.004)	0.46 (p = 0.11)
%Consuming	0.71 (p = 0.01)	0.54 (p = 0.05)	0.76 (p = 0.004)	1.00	0.51 (p = 0.08)

SMC visits	0.49 (p = 0.09)	0.42 (p = 0.17)	0.42 (p = 0.11)	0.51 (p = 0.08)	1.00
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The correlation analysis assessed associations between meal quality, the number of days meals were served, student attendance, the proportion of students consuming meals, and School Management Committee (SMC) visits. Meal quality had significant positive correlations with both the number of days meals were served ( $r = 0.62, p = .03$ ) student attendance ( $r = 0.65, p = .02$ ), and the percentage of students consuming meals ( $r = 0.71, p = .01$ ) suggesting higher quality meals are associated with more consistent delivery, better school attendance, and a greater number of students participating in the programme. Meal quality had a positive association with SMC visits ( $r = 0.49, p = .09$ ), though not statistically significant, it may indicate a trend whereby more frequent monitoring could improve the perceived and/or actual quality of meals. The number of school days where meals were provided were found to be positively correlated with student attendance ( $r = 0.58, p = .04$ ) and the percentage of meals consumed ( $r = 0.54, p = .05$ ), which implies consistent service helps maintain both attendance and consumption. The number of days meals were provided had a more moderate positive correlation with SMC visits ( $r = 0.42, p = .17$ ), but not statistically significant which suggests that frequent monitoring alone does not ensure continuous meal service. Attendance is positively correlated with the percentage of students consuming meals ( $r = 0.76, p = .004$ ) and moderately correlated with meal quality and the number of days meals were provided. These results suggest that higher quality meals and dependable service may increase attendance because they incentivize school participation from a better nutritional standpoint. Meal consumption shared strong positive correlations with meal quality ( $r = 0.71, p = .01$ ) and attendance ( $r = 0.76, p = .004$ ). A moderate positive correlation with SMC visits ( $r = 0.51, p = .08$ ) suggests that the SMC visit may lead to increased participation indirectly due to improved accountability or responsiveness to feedback from the community. Although there was no significance observed in SMC, but showed a positive trend at school level engagement, quality of meals, students attending the schools and benefiting from the meals. It's reasonable to assume participatory oversight has the potential to improve implementation fidelity, although limitations of statistical power in the current sample size remain a caveat.

Table 4: Correlation Among Parental Engagement, Food Security, and Child Meal Consumption

	Parental Trust	SMC Participation	Awareness	HFIAS	Child Consumption

Parental Trust	1.00	0.45 ( $p < .001$ )	0.52 ( $p < .001$ )	-0.34 ( $p = .008$ )	0.40 ( $p = .001$ )
SMC Part	0.45 ( $p < .001$ )	1.00	0.38 ( $p = .002$ )	-0.22 ( $p = .09$ )	0.31 ( $p = .01$ )
Awareness	0.52 ( $p < .001$ )	0.38 ( $p = .002$ )	1.00	-0.30 ( $p = .02$ )	0.36 ( $p = .005$ )
HFIAS	-0.34 ( $p = .008$ )	-0.22 ( $p = .09$ )	-0.30 ( $p = .02$ )	1.00	-0.29 ( $p = .02$ )
Child Consumption	0.40 ( $p = .001$ )	0.31 ( $p = .01$ )	0.36 ( $p = .005$ )	-0.29 ( $p = .02$ )	1.00

The correlation matrix demonstrates the connections between parents' trust in the school, participation in the School Management Committee (SMC), parents' awareness of the Mid- Day Meal (MDM) programme, household food insecurity (HFIAS), and children's consumption of meals. Parents' trust was positively related with participation in the SMC ( $r = 0.45$ ,  $p < .001$ ) and parents' awareness of the programme ( $r = 0.52$ ,  $p < .001$ ), indicating that parents that are more involved in the school committee and better aware of the programme were likely to have more trust in the school to provide meals. Parents' trust was also positively correlated with children's meal consumption ( $r = 0.40$ ,  $p = .001$ ), and negatively correlated with household food insecurity, having a stronger correlation than trust to the meals program ( $r = -0.34$ ,  $p = .008$ ), indicating that parents' trust may support better dietary outcomes and may even have a buffering effect on household food insecurity. Participation in the SMC was positively correlated with parents' awareness of the programme ( $r = 0.38$ ,  $p = .002$ ) and children's meal consumption ( $r = 0.31$ ,  $p = .01$ ). There was a small negative correlation with some level of household food insecurity ( $r = -0.22$ ), but this did not reach significance ( $p = .09$ ), suggesting that while participation increased parental awareness about the programme as well as children's consumption, engagement may not have a strong association with household food security. Parental awareness positively correlated with child meal consumption ( $r = 0.36$ ,  $p = .005$ ) and negatively correlated with household food insecurity ( $r = -0.30$ ,  $p = .02$ ). These correlations suggest that parents with awareness are more likely to ensure their children have consistent meal consumption, even if they are in a situation of mild food insecurity. HFIAS score were confirmed to be negatively correlated with parental trust, awareness, and children's consumption. Higher food insecurity correlates with lower engagement, lower trust, and lower meal consumption. Children's meal consumption was positively associated with parental trust, SMC

participation, and parental awareness which supports the idea that community engagement and informed parenting support better outcomes in MDM.

## 7 Discussion

The study declares that there are ways that define people's trust in the meals program, the reasons behind the policy that has been defined for ensuring diversity in schools and how this program is changing the psychological trust of people in their government. The results are the evidence that how the mid day meals are impacting the cognitive and service based lives of the citizens.

### 7.1 Trust in the Program and reinforcement for engagement

Observations were made that quality of meal, number of days the meals were served, presence of students, and meal consumption were positively correlated. This positive relation suggests that the attendance in schools has surged as students and the parents trust the system for providing wholesome meals regularly in a safe and nutritious manner. As stated in the studies by [16, 17] that trust in the program is equally important to the physical outcomes of the initiative. A finding that is even more significant is the moderate, but consistently positive, association between School Management Committee (SMC) visits and key delivery indicators which illustrate the accountability embedded hypothesis [22]. Participatory oversight seems to have both a deterrent and motivator effect resulting in improved compliance from staff, timely delivery, and an indicator of community oversight [30]. While not statistically significant in the model ( $r = 0.49$ ,  $p = .09$ ), the directionality between SMC visits and meal quality suggests that participatory institutions can complement bureaucratic legitimacy when activated, and demonstrate that communities can oversee and be responsible for what happens in schools, directly.

### 7.2 Psychological trust and governance legitimacy

At the household level, parental trust was a strong predictor of both awareness and programme- up-take. The positive associations between parental trust and SMC involvement ( $r = 0.45$ ,  $p < .001$ ), awareness ( $r = 0.52$ ,  $p < .001$ ) and consumption by children ( $r = 0.40$ ,  $p = .001$ ), suggest that trust in local governance is not simply a passive attitude, but also an outcome of visible and participatory service delivery [31]. To make sense of these findings, we can turn to procedural justice theory, which holds that those who are treated fairly and perceive that they had a voice in the outcomes are more likely to view institutions as legitimate. If the experience of fairness is evident, parents who were seen to receive equitable treatment with appropriate stakeholder

oversight were lulled into a belief that the system was trustworthy, and were duty bound to engage with the system, often at the level of emotional loyalty to the children they were supporting. It is difficult to determine whether the negative correlation between household food insecurity (HFIAS) and trust ( $r = -0.34$ ,  $p = .008$ ) or awareness ( $r = -0.30$ ,  $p = .02$ ) indicate that material precarity hinders cognitive engagement with governance structures; but this was a pattern we saw in prior studies in social welfare contexts where precarity was also an important factor [32, 7].

### 7.3 Interplay of social inclusion and psychological equity

The findings indicate that MDM serves a dual role of lessening nutritional inequality and simultaneously creating a sense of symbolic inclusion. When all children, regardless of caste or gender, eat the same meal in the sight of the community, MDM operates as a ritual of equality [2]. Every passing day ensures transformation of the social boundaries and norms in rural population. The correlation between visits by SMC and meal consumption ( $r = 0.51$ ,  $p = .08$ ) suggests quality of participation is more as compared to the volume. For the record, improvement is not a guarantee where SMC are just for the sake of a group of local elites. In this respect, effective decentralization requires attention to capacity building, equal gender representation, and representational equity within oversight structures.

### 7.4 Cognitive and Affective Processes

The results are also consistent with cognitive psychology that reliability of the school environment impacts behavioural consistency. The correlation between the quality of the program, trust in the system, and the attendance of the students are examples of reinforcement learning; daily meals ensure long term positive experience, which in turn confirms the rise in attendance of the students. While the child gets the nutritional value, the parent or the guardian cognitively assess the program and builds an emotional trust in the services of the system [11]. Henceforth, it is not applicable to understand the MDM effects solely on the basis of logical or nutritional measures. But, more factors like emotional security, fairness perception, dignity in the government institutions.

### 7.5 Policy implications

To build trust among the people, the SMCs need to be well equipped with defined responsibilities, transparency and feedback from people. Quality conversations with parents and teachers are always a benefit along with compliance monitoring. It becomes important for the government to gain the trust of the parent that their child is being fairly treated with other school students, when we talk about nutrition and calorie count.

The negative correlation between PSN engagement and food insecurity in households states the need to reach out for such households. The initiative provides ownership and dignity to the insecure households by transforming them into stakeholders.

This is the first in a new aspect of governance psychology, especially as they connect administrative fidelity with emotional trust. It outlines a theoretical model in which participatory monitoring can be seen as both structural and cognitive moral moderator: structurally ensuring quality and cognitively communicating fair treatment [33]. Monitoring and oversight are where programmatic delivery change can occur. This framework might apply to conversations and designing other forms of welfare programming from Integrated Child Development Services (ICDS) to community health care delivery, recognizing that the legitimacy of service delivery equates to the same, if not higher, value on understanding the how than what was delivered.

## 8 Conclusion

This study generated and illustrated a multidimensional model that ties together programme fidelity, participatory oversight and psychological trust as dynamic within the Mid-Day Meal (MDM) programme context. The findings suggest the bivariate and positive associations between reliable service delivery and student attendance/meal consumption; and confirm participatory oversight positively associates with both the quality of the programme and parental trust. The psychosocial findings indicate that trust is a dynamic feedback variable but it is enhanced through transparency, equity and inclusion. Mid-day meal programs are a boon for students, as these programs bring many curious minds in the leu of empty stomachs or financial odds ensuring nurture of young minds and healthy bodies.

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