

Does the Size, Timing, Duration and Frequency of Cash Transfers Matter? Evidence on Socioeconomic Empowerment among Pastoralist Women in Turkana Central, Kenya

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ABSTRACT

Pastoralist women in Turkana Central Sub-County face extreme poverty, high female household headship, and very low educational attainment, despite the region having one of Kenya's highest concentrations of cash transfer coverage which is a contradiction of heavy programme presence alongside persistently low empowerment that motivated this study. Cash transfer research has traditionally treated transfers as a single, undifferentiated event, leaving little known about whether design features specifically size, frequency, predictability, and duration of enrolment, shape what the money can achieve, a gap especially pronounced for pastoralist populations whose livelihoods and power structures differ from the settled populations most literature draws on. Anchored in Kabeer's (1999) resources–agency–achievements framework, the study examined how HSNP transfer size, timing, frequency, and duration relate to three empowerment indicators: savings, household decision-making, and meal frequency. Using an explanatory sequential mixed-methods design, a stratified random sample of 342 HSNP beneficiaries yielded 240 valid questionnaires, supplemented by three key informant interviews and two focus group discussions. Quantitative data were analysed using descriptive statistics, chi-square tests, and multiple linear regression; qualitative data were analysed thematically. Larger transfer amounts were significantly associated with higher savings (80.2% above Ksh2,701 vs. 53.2% at or below Ksh2,700; $p < 0.001$; $\beta = 0.230$, $p < 0.001$, $R^2 = 0.132$), as were longer participation, greater frequency, and predictable, timely disbursement ($F = 10.943$, $p = 0.001$, $R^2 = 0.122$), with untimely disbursement the strongest negative predictor ($\beta = -0.242$, $p < 0.001$). However, none of these features significantly predicted household decision-making or meal frequency; decision-making was already near-universal (96.7%–100%), suggesting a ceiling effect. HSNP transfers thus reliably strengthen the resource dimension of empowerment without automatically translating into agency or achievement, likely due to entrenched gender norms, transfer adequacy, and intrahousehold power dynamics. The study recommends periodic review of transfer amounts against living costs, predictable disbursement schedules, and pairing transfers with financial literacy, savings-group facilitation, and household dialogue.

Keywords: cash transfers; socioeconomic empowerment; pastoralist women.

INTRODUCTION

Women's empowerment is central to development discourse, formalised through SDG 5's commitment to equal access to economic resources and full participation in economic and public life. Kabeer's (1999) framework remains the field's most durable lens, defining empowerment as the interaction of resources, agency, and achievements, a distinction that matters once transfer *design*, rather than transfer presence alone, becomes the analytical focus.

Cash transfer programmes are among the most widely deployed resource-based interventions, yet evidence on their empowerment effects is mixed. Reviews suggest consistent increases in consumption and regular decision-making, but smaller effects on wider social and political agency (Bastagli et al., 2019). This has

moved the literature from whether transfers empower women to under what conditions they do, with results being influenced less by the presence of a transfer than its size, predictability and the socio-cultural context into which it is introduced (Diaz-Pardo & Rao, 2024).

Two design dimensions reappear without systematic testing in combination: transfer size, and timing/duration/frequency. Findings on size are mixed; limited transfers have increased women's mobility and decreased acceptance of intimate partner violence in some contexts (Ambler & de Brauw, 2021), while larger transfers have at other times only achieved modest progress with increased spousal tension, with some authors warning that transfers large enough to threaten patriarchal authority can lead to conflict rather than empowerment (Bonilla et al., 2017; Buller et al., 2018). On timing, it is the regularity and predictability of income, rather than receipt per se, that allows poor households to manage risk (Song & Imai, 2019), directly applicable to Kenya's HSNP, which is based around predictable bi-monthly payments. Program characteristics such as conditionality (Palermo et al., 2022) influence even well-documented results such as reductions in intimate partner violence. Size, timing, length, and frequency, however, are rarely evaluated as joint, interacting variables, with most studies isolating one or neither.

The gap is most pronounced for pastoralist women, whose empowerment trajectories are determined by structural constraints largely absent from the broader literature: customary land and livestock governance vests control with male clan elders, thereby constraining women's ability to translate cash into durable agency (Unks et al., 2023; Vincent, 2022). Turkana County epitomises these compounding vulnerabilities at scale with 79.4% of the population living in extreme poverty and 64.2% of households reliant on cash transfers, indicating high dependence on programs such as HSNP, which has been running in the region for over a decade and channels around 60% of its transfers to women.

There remains limited gender-disaggregated evidence on cash transfers in Africa (Kinyondo & Magashi, 2019), and recent work highlights unanswered questions about how transfer design interacts with local gender norms to produce (or not produce) durable shifts in agency (Austrian et al., 2022; McCarthy & Krause, 2024). This gap narrows further in Turkana Central Sub-County, which records the highest proportion of widows and widowers in the northern region (13.7%), the highest population of female-headed households nationally (52.1%) (Kenya National Bureau of Statistics, 2018), and 79.5% of women aged 18 and above who have never attended school (Kenya National Bureau of Statistics, 2019), a population for whom design choices carry outsized consequences, yet where no study has examined how transfer size, timing, frequency, or duration jointly shape empowerment despite over a decade of HSNP implementation.

It is this convergence of a well-established but under-specified theoretical framework, design evidence never tested jointly, and a population for whom the stakes are unusually high that motivates this study. Applying (Kabeer, 1999a) framework, the study examines how HSNP transfer size, timing, frequency, and duration relate to three empowerment indicators namely savings, household decision-making, and meal frequency, among pastoralist women in Turkana Central Sub-County, testing whether these design features are significantly associated with empowerment outcomes.

The findings provide practical assistance for policymakers, notably the National Drought Management Authority and the Ministry of Labour and Social Protection, on how to calibrate the magnitude and schedule of transfers, guiding progress toward SDG 1 and SDG 5. Academically, the study extends feminist economics and social protection literature by testing specific design indicators, rather than transfer receipt alone, against power dynamics and resilience in pastoralist communities, an intersection with limited prior grounding.

LITERATURE REVIEW AND THEORETICAL FRAMING

Theoretical Framework:

Kabeer's Empowerment Framework

This study is anchored in Kabeer's (1999) empowerment framework as its main analytical perspective to investigate the influence of HSNP cash transfer size, timing, duration and frequency shape pastoralist

women's socioeconomic empowerment in Turkana Central Sub-County. Grounded in Sen's capability approach, the framework conceptualises empowerment as the process by which individuals, especially those who have been previously deprived of this ability, acquire the ability to make strategic life choices. Its three interconnected facets frame empowerment not merely as an economic result but as a process rooted in social equity and shifting power relations (Berik & Kongar, 2021; Doshi, 2023)

Resources are the material, human, and social preconditions for choice such as savings, education, and social support. In this study, savings accumulated from HSNP transfers constitute the material resource dimension, but as a prerequisite that extends women's decision sets when translated into real opportunities. This conversion is not automatic: cash transfers usually boost material resources, such as food security and savings, but the conversion of these resources into agency and achievement is often hindered by intrahousehold dynamics and patriarchal norms (Sambo & Huseby-Lie, 2025). This underscores why transfer design features such as size of cash transfers and disbursement timing matter: they shape whether resources can be meaningfully converted into agency, not merely accumulated.

Agency has been defined as the capacity to define and act on one's own goals and is operationalised in this study through household decision-making indicators. In pastoralist contexts, agency is typically collective rather than individual; in Turkana, authority is typically negotiated through traditional institutions, kinship structures and communal land claims rather than asserted individually (Rodgers, 2021), while empowerment is generally understood as relational and political, grounded in social structures (Buisson et al., 2022). Gendered norms further complicate this dimension: cash transfer programmes that target women have, in some settings, been found to reduce decision-making authority among uneducated beneficiaries by reinforcing existing norms that privilege male decision-making (El-Enbaby et al., 2025). This dimension is therefore examined through indicators of women's bargaining power over household expenditure, and children's education and health decisions.

Achievements are realised outcomes of exercised agency, or more simply, advances in well-being across the self, family, and economy (Heaton et al., 2024). Achievements bring material benefits but also relational and psychological ones. Cash transfers can increase dignity and social cohesion, but there are differences in outcomes among age groups: older recipients find new roles in families and younger ones experience new relational tensions about expectations of support (Sambo & Huseby-Lie, 2025). In this study, achievement is operationalised through the measurable indicator of household meal frequency. Kabeer's framework was selected over alternative models, including Longwe's (1998) Women's Empowerment Framework, because its tripartite structure allows examination of whether cash transfers merely provide resources or catalyse genuine transformation in women's strategic agency and life outcomes, distinguishing "welfare agency" from "feminist agency" rather than relying on simple econometric proxies. The framework is not without limitations: critics note it underspecifies the mechanisms and timeframes through which resources translate into agency and, ultimately, achievements (Bonilla et al., 2017; Rahman, 2013) and has been faulted for insufficient attention to intersectionality and structural constraints such as healthcare access and systemic gender inequality (Connell, 2012; Kabeer, 2005). This gap is directly relevant to the present study: by examining how transfer size, timing, frequency and duration condition the resource-to-agency-to-achievement pathway, this study addresses precisely the transition mechanisms the original framework leaves underexplored. In practical terms, this results in the conceptual pathway of the study where HSNP cash transfers accumulate into savings, the resource dimension, which influences household decision-making, the agency dimension, which influences household meal frequency, and the achievement dimension. The strength of each link in this chain is dependent on the beneficiary's age, marital status, and educational attainment, which can either strengthen, weaken, or maintain the relationship between size, timing, frequency and duration of cash transfers and these empowerment outcomes.

Empirical review:

Size of Cash Transfers and Socioeconomic Empowerment

Transfer size is a critical design parameter shaping the empowerment potential of cash transfer programmes. Evidence points to a threshold effect: modest transfers support psychological well-being and short-term

consumption smoothing, but larger transfers are more consistently associated with asset accumulation, savings, improved risk management, and reduced intimate partner violence (Ben Brik, 2025). Smaller transfers have been found less effective than larger ones in improving psychological well-being and wealth accumulation (Wang & Luo, 2019), while a comparison of \$20 and \$100 monthly unconditional transfers found that although both were positively received by low-income mothers, the larger transfer generated substantially greater financial activity, accounting for 67% of total withdrawals against 33% for the smaller transfer, suggesting that adequate transfer size is a precondition for the liquidity needed for meaningful expenditure (Rojas, 2020).

The consequences of inadequate transfer size are most visible in high-poverty, high-inflation settings. Transfers as low as \$10–\$15 per household have proved too small to meaningfully improve food security once purchasing power had eroded (Ndlovu et al., 2021), while a maternity grant worth roughly \$7 could purchase only a handful of kilograms of fruit, limiting its capacity to improve maternal nutrition or economic agency (Gram et al., 2019). Conversely, where transfers are sufficiently large, effects on empowerment become more direct: a near-doubling of conditional transfer values in Uruguay coincided with a marked decline in domestic violence, consistent with the hypothesis that higher relative income reduces women's economic dependency and vulnerability within the household (Borraz & Munyo, 2020).

Transfer size similarly determines whether households can move beyond subsistence into productive investment. Indeed, larger transfers help to ease credit constraints and enable savings accumulation, supporting higher-return investment (Stoeffler et al., 2019), while women in Syria reported wanting larger grants specifically to finance income-generating assets such as sewing machines (Blackwell et al., 2019), illustrating that undersized transfers risk locking programs into meeting only short-term consumption needs. However, amount of cash transfer comes with trade-offs: larger payments could reduce incentives for labour supply (Saeed & Hayat, 2020) and the appropriate size should take into account the poverty level of beneficiaries (Hadna & Askar, 2022). In addition to the nominal value, the stability of the transfer value in time is also significant, because inflation and the devaluation of currency have been shown to reduce the purchasing power and bring about uncertainty which impedes planning, saving and investment (Ojiambo, 2023).

Transfer size has been identified in the literature as an important determinant of empowerment outcomes. However, there is no consensus on an optimal size in different contexts and little evidence from pastoralist settings where livelihoods, mobility and exposure to shocks are quite different from those of the settled populations discussed above. This study, however, seeks to fill that vacuum by studying the effect of HSNP transfer size on socio-economic empowerment of pastoralist women in Turkana Central Sub-County.

Timing, frequency and duration of Cash Transfers and Socioeconomic Empowerment

Timing, regularity and duration play a role in the direct consumption outcomes and the long-term empowerment potential of cash transfers, however the link between regularity and empowerment is complicated (Ben Brik, 2025; Karachiwalla et al., 2024). It has been found that monthly transfers are more effective than lump-sum disbursements in stabilising consumption (Wang & Luo, 2019). Regular and predictable financial transfers are more effective than irregular payments in enhancing planning, saving and investing.

Timing relative to expected shocks is important: cash transfers disbursed before anticipated events such as droughts have been shown to significantly bolster food security by allowing for proactive coping mechanisms (Lawlor et al., 2019), while consistent, predictable transfers have been associated with the formation of informal savings groups that extend benefits beyond the individual household (Granlund & Hochfeld, 2020).

It appears that time of exposure is especially important, since the benefits of empowerment often only emerge after a long period of involvement in the program. In the case of the Juntos program in Peru, recipients with a regular record of cash transfers performed better than those with irregular payments and the probability of investing in productive assets improved only after two or more years of participation (Cirillo & Giovannetti, 2018).

This pattern is supported by long-term evidence: ten years after the introduction of Mexico's Oportunidades program, there were measurable educational gains (Whetten et al., 2019), while Pakistan's Benazir Income Support Program showed no statistically significant effect on women's empowerment within two years, but significant changes in mobility, decision-making, and political participation after five to eight years of regular cash transfers (Iqbal et al., 2021), suggesting that changes in entrenched social norms take time, far exceeding typical evaluation durations.

This relationship is not universal, however: a large-scale unconditional transfer programme in Kenya generated a substantial local economic shock without producing a corresponding shift in a composite measure of women's empowerment (Egger et al., 2019), indicating that economic stimulus alone does not guarantee measurable empowerment gains. Taken together, the evidence suggests that consistency and duration of exposure are necessary, though not sufficient, conditions for cash transfers to move beyond consumption smoothing toward durable empowerment.

Substantial gaps remain in understanding how regular versus irregular payment schedules compare within a single programme, and the optimal disbursement frequency for maximising empowerment in volatile, pastoralist contexts remain largely unexamined. This study addresses this gap by examining how the timing, duration and frequency of HSNP cash transfers shape empowerment pathways among pastoralist women in Turkana Central Sub-County.

METHODOLOGY

Research Philosophy and Design

The study adopted a pragmatic research philosophy, using an explanatory sequential mixed-methods design. This meant quantitative data was collected and analysed first, then followed up with qualitative data that helped explain and add depth to the numbers. The study was conducted in Turkana Central Sub-County, Turkana County, Kenya, where pastoral nomadism is the predominant livelihood and the people depend mostly on livestock production and subsistence cultivation for their livelihoods. The study drew a stratified random sample of 342 beneficiaries, proportionate to how the population is spread across the different sub-county locations. Data collection combined a quantitative survey with three key informant interviews and two focus group discussions, the latter two used to add context and depth to the statistical results. The survey questionnaires captured details on HSNP transfer size, timeliness, duration, and frequency of disbursement, as well as three empowerment indicators: household savings behaviour, household decision-making, and household meal frequency. The key informant interviews and focus group discussions were audio-recorded, transcribed, and translated from Turkana to English.

Data Analysis

Quantitative analysis proceeded in three stages. Descriptive analysis characterised the distribution of transfer size and timing, duration and frequency among respondents. Bivariate analysis used chi-square tests and cross-tabulation to examine associations between transfer size, timing, duration and frequency, and each empowerment indicator. Multivariate analysis used multiple linear regression to estimate the independent effect of transfer size (amount and structure) and timing, duration and frequency (frequency, timeliness, and duration) on each empowerment indicator, controlling for other predictors in the model. Qualitative data were analysed thematically to contextualise and triangulate the quantitative findings. All analyses used a significance threshold of $p < 0.05$.

Results and Discussion

Table 1. Profile of respondents

Category	Sub-category	Percentage
Transfer amount	Below Ksh2,700	64.2%
	Above Ksh 2,00	35.8%

Transfer structure	Fixed amount	75%
	Variable amount	25%
Duration in HSNP Programme	Above 5 years	52.1%
	Below 5 years	47.9%
Transfer frequency	Monthly	64.2%
	Every two months	12.9%
	Quarterly	15.4%
	Sporadic	7.5%
Timing within month	Beginning of month	45.4%
	Mid-month	14.2%
	Towards end month	13.3%
	Unpredictable	27.1%

Among the 240 valid respondents, majority of the beneficiaries received a HSNP cash transfer below Ksh2,700 while the cash transfer was predominantly fixed rather than variable indicating a stable disbursement design. More than half of the respondents participated in HSNP for more than five years reflecting substantial beneficiary tenure while monthly disbursement emerged as the most common frequency followed by bimonthly cash transfers, quarterly and sporadic payments. The timing of transfers was comparatively less predictable despite the general consistency in amount and frequency of cash transfers. The disbursement scheduling had a degree of variability as a considerable proportion of respondents reported receiving transfers mid-month, others reported at the beginning of the month, others towards end of the month while some beneficiaries received in unpredictable times.

Table 2: Bivariate associations between cash transfer characteristics and socioeconomic empowerment outcomes.

Transfer Characteristic	Outcome Variable	Comparison Groups	% Reporting Increased Outcome	χ^2	p-value
Transfer Amount	Increased Savings	>Ksh2,700 vs ≤Ksh2,700	80.2% vs 53.2%	17.224	<0.001*
Transfer Amount	Decision-Making	>Ksh2,700 vs ≤Ksh2,700	—	2.272	0.132
Transfer Amount	Meal Frequency	>Ksh2,700 vs ≤Ksh2,700	—	0.001	0.97
Transfer Structure	Increased Savings	Variable vs Fixed	86.7% vs 55.0%	19.341	<0.001*
Transfer Structure	Decision-Making	Variable vs Fixed	—	1.356	0.244
Transfer Structure	Meal Frequency	Variable vs Fixed	—	1.569	0.21

***Statistically significant**

The bivariate analysis above reveals that the size and structure of HSNP cash transfers had a significant association with beneficiaries' savings behaviour but not with household decision making and frequency of meals. respondents receiving above sh2,700 and those receiving variable cash transfer amounts were considerably more like to report increased savings with both associations reaching statistical significance ($p < 0.001$) suggesting that larger and flexible cash transfer disbursements enable beneficiaries to accumulate savings or make lumpsum investments. However, lack of significant association with household decision making and meal frequency indicates that the size of cash transfers and structure alone does not meaningfully influence these dimensions of empowerment.

Table 3: Multivariate Regression Results - Effects of Cash Transfer Characteristics on Socioeconomic Empowerment Outcomes

Outcome Variable	Predictor	β (Standardized)	p-value	Significance	R ²	F-value	Model significance
Savings	Transfer Amount	0.23	<0.001	Significant	0.132	18.093	Significant
Savings	Transfer Structure	-0.249	<0.001	Significant			
Decision-Making	Transfer Amount	0.088	0.179	Not Significant	—	1.587	Not Significant (p = 0.207)
Decision-Making	Transfer Structure	-0.062	0.344	Not Significant			
Meal Frequency	Transfer Amount	-0.015	0.82	Not Significant	—	0.806	Not Significant (p = 0.448)
Meal Frequency	Transfer Structure	-0.083	0.206	Not Significant			

The multivariate regression results corroborate with the bivariate findings, confirming that cash transfer amounts and structure of cash transfers are significant predictors of savings but not predictors of household decision making or meal frequency. Cash transfer amounts had a positive and significant effect on savings indicating that larger cash transfers were associated with greater savings while the structure of cash transfers had a negative and significant effect suggesting that fixed cash transfers were associated with lower savings. Combined, these two predictors accounted for 13.2% of the variance in savings and the overall model was statistically significant (F=18.093). Overall, cash transfer amounts and transfer structure did not predict decision making or meal frequency and their corresponding regression models not statistically significant. This indicates that the size and structure of cash transfers exert a measurable influence specifically on beneficiaries' saving behaviour, controlling other factors, while their effects on broader empowerment dimensions such as household decision making and meal frequency remain limited within this model.

Table 4: Bivariate Association Between Timing, duration and frequency and Socioeconomic Empowerment Outcomes

Temporal dimension	Outcome variable	χ^2	p-value	Significance level
Duration of participation	Savings	20.408	<0.001	Significant
	Decision-making		0.254	Not significant
	Meal frequency		0.695	Not significant
Frequency of payment	Savings	13.285	0.003	Significant
	Decision-making		0.518	Not significant
	Meal frequency		0.097	Not significant
Timing of disbursement	Savings	19.188	0.001	Significant
	Decision-making		0.564	Not significant
	Meal frequency		0.632	Not significant

The saving behaviour showed statistically significant association across three variables namely duration of participation, frequency of payment and timing of disbursement compared to decision making and meal frequency. Timing of disbursement was the strongest predictor of savings.

Table 5: Savings Rates by Duration of Participation and Timing of Disbursement

Category	Savings (%)
Duration: <1 year	37.5

Duration: ≥ 5 years	79.0
Timing: Month-end disbursement	87.5
Timing: Unpredictable disbursement	46.2

Longer participation in cash transfers was associated with savings with predictable end -month cash transfer disbursement associated with substantially higher savings than unpredictable timing pointing to the behavioural value of regularity in cash transfer scheduling.

Table 6: Multivariate Regression Model Summary for Empowerment Outcomes

Outcome variable	F	p-value	R ²	Model significance
Savings	10.943	0.001	0.122	Significant
Decision-making	1.095	0.352	0.014	Not significant
Meal frequency	2.120	0.098	0.026	Not significant

The multivariate analysis confirmed the bivariate patten that frequency, timing and duration of cash transfers were significant predictors of savings but not of decision-making or meal frequency. The savings model was statistically significant⁸ explaining about 12.2% of the variance in savings behaviour.

Table 7: Regression Coefficients for Predictors of Savings

Predictor	β (Standardized Coefficient)	p-value	Direction of Effect
Frequency of cash transfer	0.163	0.009	Positive
Timeliness (untimely disbursement)	-0.242	<0.001	Negative
Duration of participation	0.144	0.019	Positive

Frequency and duration of cash transfer were positively associated with savings while timeliness of cash transfers was negatively associated suggesting that unpredictable or delayed cash transfers undermine the saving behaviour.

CONCLUSIONS AND RECOMMENDATIONS

This study set out to understand how size, frequency, duration and timing of HSNP cash transfers relate to the socioeconomic empowerment of pastoralist women in Turkana Central Sub-County. The evidence points to a clear but bounded conclusion; The size and predictability of cash transfers matter for savings but not for decision-making or meal frequency. Larger and more predictable cash transfers and timely disbursements were consistently linked to larger savings. Overall, the study concludes that HSNP cash transfer design features operate in a dimension-specific manner: they reliably strengthen the resource (savings) dimension of empowerment envisaged in Kabeer's framework, but their influence on agency and achievement is limited and likely mediated by factors beyond transfer size and schedule, including gender norms, transfer adequacy, and intrahousehold power dynamics.

The government should periodically review cash transfers against the real cost of living, since beneficiaries themselves consistently describe current amounts as insufficient. Disbursement should be made as predictable and timely as possible, and where delays are unavoidable, beneficiaries should be told in advance rather than left to absorb the uncertainty. The study concludes that savings gains are not translating into decision-making power or better nutrition on their own and therefore HSNP cash transfers should be deliberately paired with complementary support such as financial literacy training, savings-group facilitation, and household dialogue on resource allocation, so that the financial gains beneficiaries make have a genuine chance to reshape household life more broadly. Finally, continued community sensitisation on productive use of cash transfers remains worthwhile but should be pursued with a realistic expectation: adjusting the transfer itself, however well designed, is unlikely to shift decision-making or food security without this kind of complementary, sustained support alongside it.

Practical and theoretical implications of the study

Theoretically, the study demonstrates that Kabeer's (1999) empowerment framework is suitable for studying the moderating effect of socioeconomic attributes on women's empowerment, particularly when operationalised through interaction terms that test the conditional nature of the resource-to-agency-to-achievement pathway. This finding suggests that specific design attributes, amount, frequency, duration and timeliness translate reliably into savings but do not automatically extend into agency or achievement. Practically, the findings offer the National Drought Management Authority, the Ministry of Labour and Social Protection, and other HSNP implementers a clear, actionable signal: transfer size and predictability of disbursement are effective levers for strengthening household savings, but they are insufficient on their own to shift decision-making power or food security outcomes. This implies that cash transfer programming aimed at broader empowerment goals should not rely on transfer design adjustments alone; rather, transfers should be deliberately bundled with complementary interventions, such as financial literacy training, savings-group facilitation, and household-level dialogue on resource allocation, that directly target the agency and achievement dimensions Kabeer's framework identifies as distinct from resource access.

LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

This study is limited by its cross-sectional design, which cannot establish causality or capture how the effects of transfer size and timing, duration and frequency evolve over sustained programme exposure; by its reliance on self-reported measures of savings, decision-making, and meal frequency; and by its geographic scope, limited to Turkana Central Sub-County. Future research should adopt longitudinal designs to examine the long-term effects of cash transfer size and timing, duration and frequency on women's sustained empowerment and food security and should include comparisons of payment modalities such as mobile money, digital wallets, conventional banking, and in-person cash, to assess their differential effects on inclusion, control over funds, and empowerment outcomes across pastoral settings. Comparative research contrasting HSNP beneficiaries with matched non-beneficiary households would further clarify programme effects relative to counterfactual conditions.

DECLARATIONS

Disclosure statement

There was no potential conflict of interest by the authors

Ethical Considerations

The study obtained licences from the University and the government. It also obtained informed consent from all participants, assured confidentiality and anonymity of responses, and obtained the requisite institutional and county-level research approvals prior to data collection.

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Data availability statement

The data that support the findings of this study are available upon request with the permission of the corresponding author.

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