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Estrategias para acelerar la contribución de los Programas de Alimentación Escolar a los resultados nutricionales: Evidencias y Oportunidades.

Strategies to accelerate the contribution of School Feeding Programs to nutritional outcomes: Evidence and Opportunities

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The role of school meal programs is evolving

School meal programs have a historic role in stimulating school participation.

Their contributions to addressing food insecurity and improving nutritional status is also well documented.

Recently school meal programs have been given a new objective: to enhance small holder farm integration and market development.

Which objective is emphasized depends, of course, on context.

I will use this session to illustrate that improvements in education, and nutrition in Latin America as well as the availability of new social protection instruments have shifted the potential roles of school meal programs into new areas and challenges.

Do School Meals Improve School participation?

Short answer: Often

Impact on enrollment is similar to CCTs

But the success in universal school participation in the last two decades has made this role largely outdated. Globally, primary enrolment is > 90%. In contrast, preschool enrolment is < than 50%

School meals are generally pro-poor in Latin America but since meals are hard to target without copayment measures, cash transfers serve this function more effectively.

Do School Meals Improve learning?

Short answer: Occasionally

Timing is an issue; snacks or breakfasts may influence attention span; lunches less likely.

Impact is dependent on classroom organization and teaching quality

In some countries where children go home for lunch, attendance declines in the afternoon if children stay home.

Do School Meals Improve Nutrition?

Short answer: This is highly context specific. Issue is partly that the most vulnerable period is in utero and before 2 years

Global evidence shows that meals contribute to weight gain. This gain is greater the younger the child.

But this may not be desirable. Indeed, in many Latin American settings, new programs are being designed to increase diet diversity and to reduce the risk of overweight.

Do we want the meal to 'stick' to the student? Or is it a transfer to the household perhaps to the advantage of younger siblings? There is evidence on both.

Making school meals more nutrition sensitive: micronutrients

Diverse menus in school meals can decrease anemia. This is particularly the case with programs that provide meat.

Far less expensive is the inclusion of micronutrient fortification in the meal.

For example, a review of 10 studies found that school feeding raised serum concentrations of iron, iodine, vitamin A and vitamin B in 8 cases while also improving hemoglobin levels.

Fortified snacks can also help address anemia.

Flour is the most common vehicle for fortification although extruder rice can be fortified as can milk. Salt can be fortified with iodine (and iron) and oil can be fortified with vitamin A.

Making schools more nutrition sensitive: a platform for health interventions

Schools can provide an environment for regular screening for malnutrition and referrals.

More broadly, schools can be the setting for scheduled health programs. Indeed, they can even be used as a venue for programs aimed at adolescents no longer enrolled as students.

Schools can provide periodic supplementation as an alternative to fortification. For example, daily multivitamins provided to 4th grade students in China increased hemoglobin as well as math test scores.

Some school health programs can be decentralized: In China schools provided information about anemia to principals and, for some, also provided a financial incentive to improve.

Both interventions led to improvements although the principals who received incentives achieved larger improvements.

Making schools more nutrition sensitive: deworming

The WHO recommend that deworming medicines should be given once a year when the prevalence of soil-transmitted helminth infections in the community is over 20%, and twice a year when the prevalence exceeds 50%.

The efficacy of deworming is currently debated with opinions depending, in part, on which study is included in any review and whether the reviewer is an economist or an epidemiologist.

However, given the open debate and the fact that the medicine is cheap (< \$0.02 when purchased and often freely provided) and with no side effects, many programs should continue with the recommendation.

Making schools more nutrition sensitive: nutrition education

Nutrition education can discourage unhealthy snacks and sugary beverages. Removing vending machines and making drinking water easily available reinforces the message. But it is harder to restrict vendors outside the immediate premises.

There are innovative programs for school curricula aimed at increasing exercise as well as targeted programs to reduce risky behavior among adolescents. Programs reviewed in the 2015 Lancet found integrated programs (aimed at exercise as well as food preferences) for **primary aged** children to be most effective.

More generally, parental education is a strong determinant of the nutritional status of the next generation. However, I have not seen experimentation or guidelines on curricula in schools for teaching future care-givers of child about nutrition and child stimulation.

Conclusion

Providing school meals is relatively easy: most countries in Latin America do this well.

Providing knowledge about proper nutrition is harder: it remains a challenge for many countries in the region.

Providing behavioral change is harder still: programs that integrate improved diet diversity (and restrictions on access to unhealthy foods) with education and exercise are best started early.

There is extensive experience on programs for primary school aged children. However, more knowledge is needed on how to reach adolescents – both those in school and those no longer in school.

There is a different challenge for preschool children. Although evidence in the region shows that this age group is particularly responsive to nutrition programs as well as incentives for enrolment, many preschools are private and, thus, reaching them is school meal programs may require innovation.