

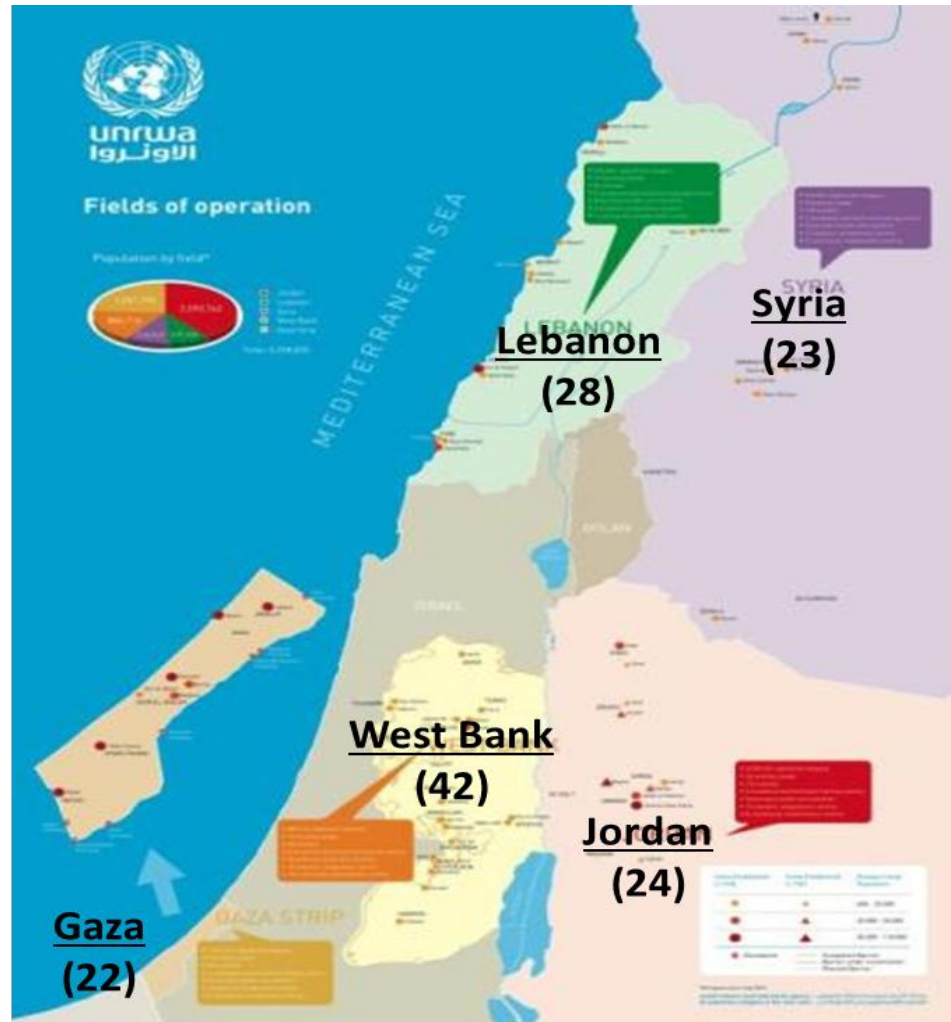
Outcomes of campaigns for Palestine refugees with diabetes mellitus attending UNRWA health centers

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What is **UNRWA** (United Nations Relief and Works Agency for Palestine Refugees in the Near East)

- It began operations in may 1950.
- 5 million Palestine refugees in 5 Fields (West Bank, Gaza, Jordan, Lebanon, Syria)
- Provide 3 main services
 - Education, Health, Relief & social services
- Health services
 - 139 primary health centers (HC)
 - \$ 100M a year
 - Free of charge services



UNRWA 5 fields of operation (registered Palestine refugee)

UNRWA NCD* care at health centers

- NCDs is the leading cause of mortality and morbidity among Palestine refugees (PR).
- ~11% of the PR population above 40 years has diabetes mellitus (DM).
- UNRWA supported by the World Diabetes Foundation, conducted a Clinical Audit on diabetes care in 2012.

*non-communicable diseases (NCDs)

Major clinical audit findings

- Various issues in DM management and prevention.
- Over 90% of DM patients are overweight or obese, 64% obese.
- UNRWA embarked on a new campaign to assist diabetic patients' to change their lifestyle.

“Life is Sweeter with Less Sugar”

Objectives:

- To build medical staff capacity for diabetes care
- To increase awareness and health education about DM care through conducting group awareness sessions and change the attitude and behavior to healthy life style.
- Conduct outreach screening activities in the community targeting high risk population.

Methodology

Diabetes Campaign timeframe:

- Phase 1: planning and preparation in each field (pre-planning campaigns meetings, partnership with NOGs, advance training on comprehensive diabetes care, and availability of budget for each HC).
- Phase2: launch of campaign and implementing the activities, for 6 months.
- Phase 3: evaluation and data collection

Inclusion criteria:

The eight largest HC in (Jordan, Lebanon, Gaza Strip and West Bank) were selected to conduct the campaign:

- Having DM and/or DM and hypertension (HTN) for more than one year, attending the selected HCs.
- Willing to participate.

Activities conducted in each HC:

- Educational** session about diabetes care management
- Healthy **cooking** group sessions
- Group exercise** sessions on a weekly/monthly basis.

Measurements:

- Waist circumference (WC), weight, height, 2 hours postprandial glucose tests (2hrPPG), cholesterol, & blood pressure.
- Percentage of sessions attended were tracked on a monthly basis.
- Pre –and post questionnaires on knowledge and practice of diabetes care were collected.

Data Handling and Statistical Analysis

- Data was analyzed using Epi info 2000 and SPSS.

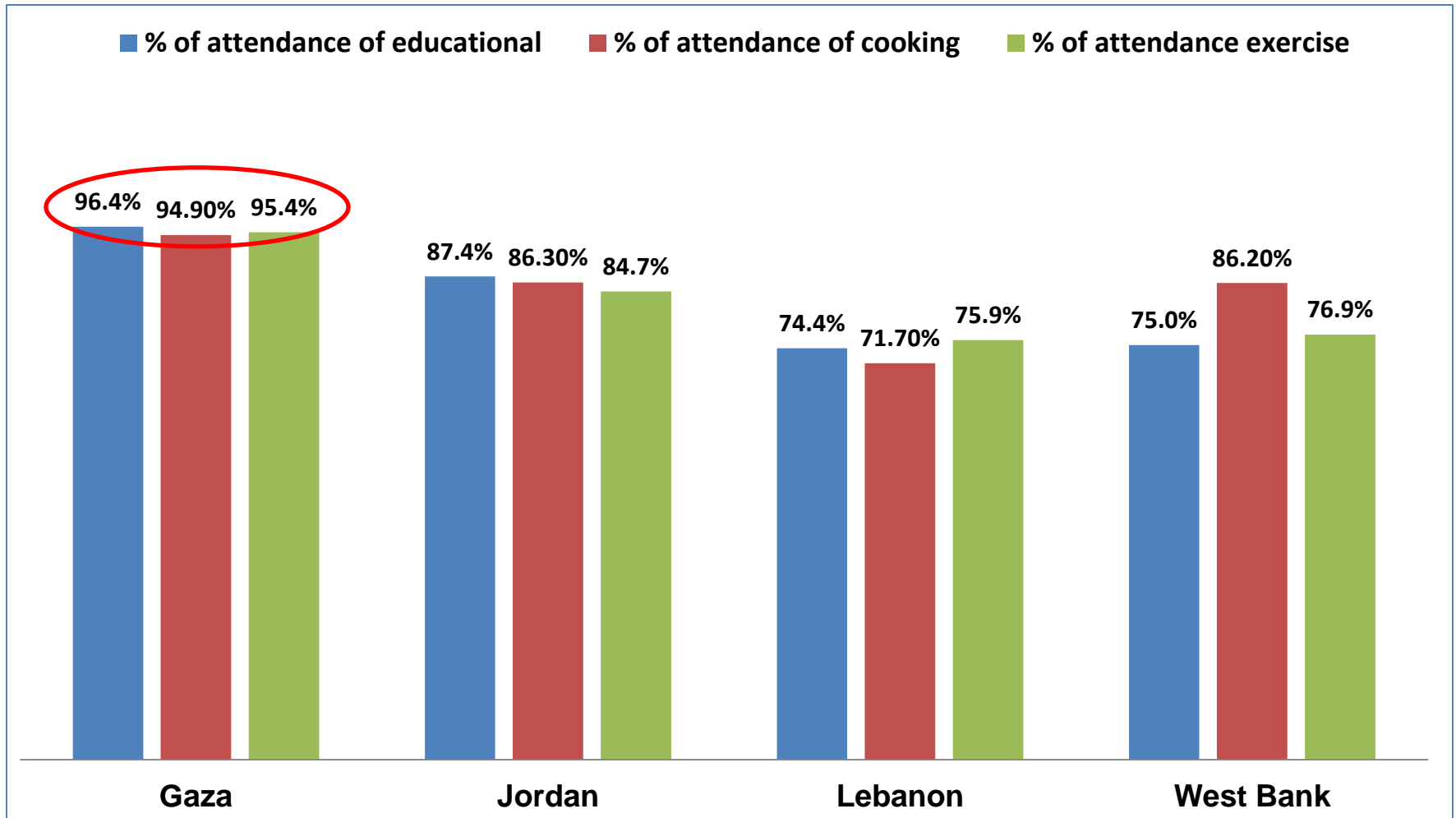
Results

Patient demographics

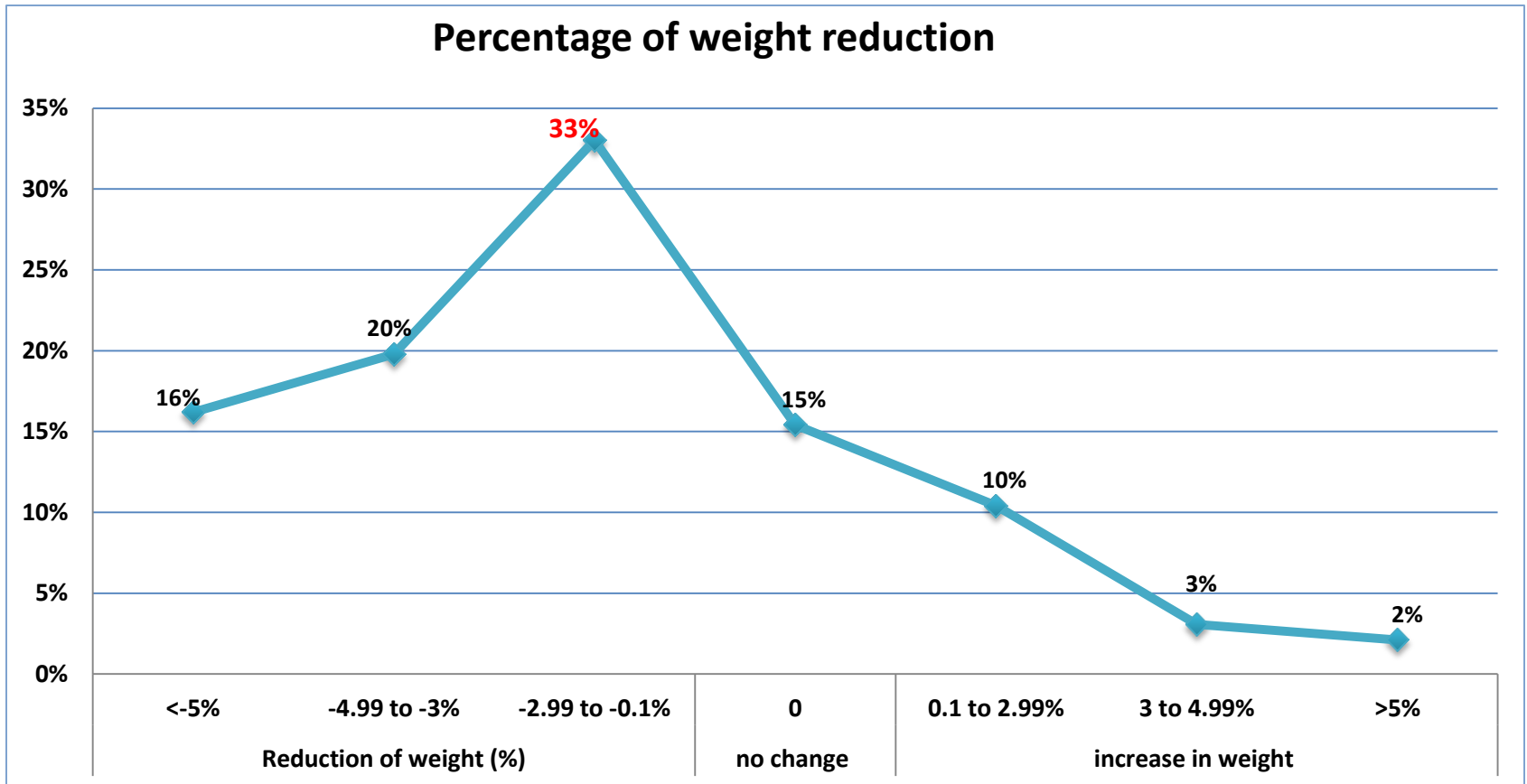
A total of 1,300 patients with DM &/or DM&HTN from the 8 largest HCs in the four fields, were enrolled:

Age	Female	Male	Total
Below 20 years	12	6	18
30-39 years	60	24	84
40-59 years	703	139	842
60+ years	175	54	229
Total	950	223	1173

Percentage of attendance on sessions

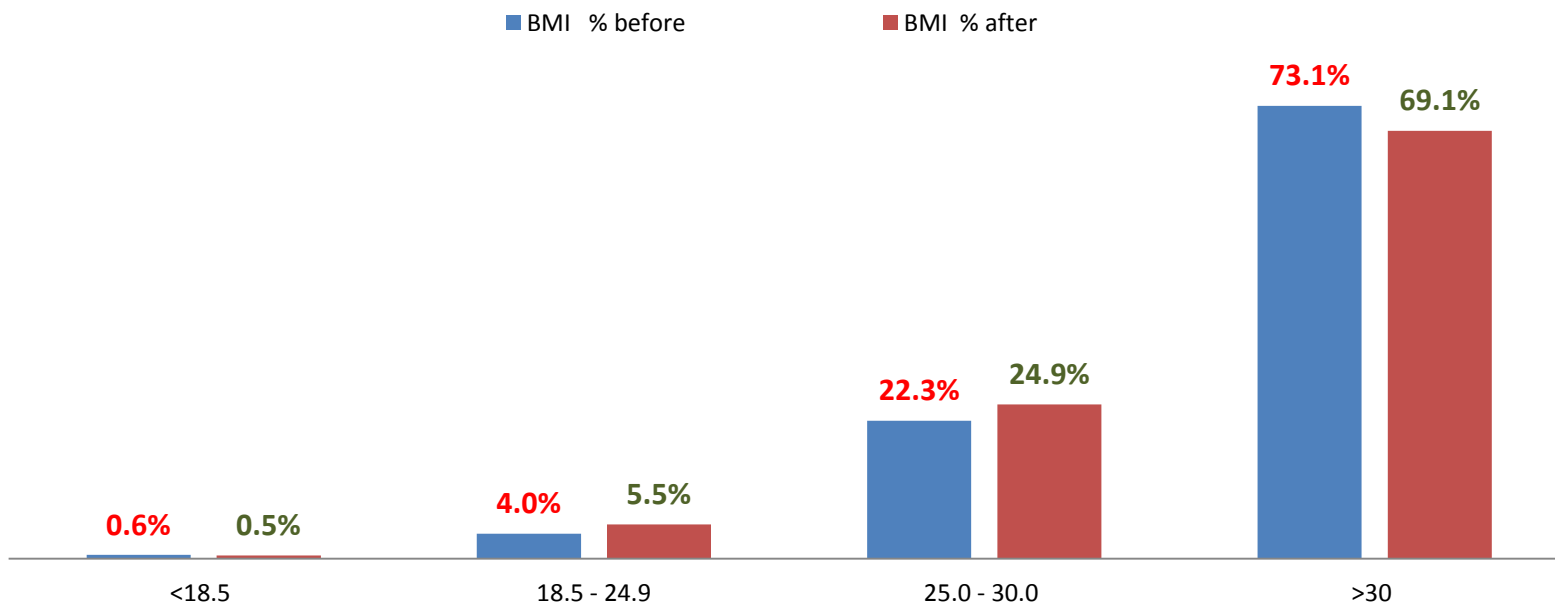


Percentage of Weight reduction



BMI before and after the campaign

BMI before and after the campaign



	Categories	P- value
BMI change (before & after campaign)	<=30	0.000
	>30	0.000

Waist circumference before and after the campaign

	Categories	P-value
Waist circumference (cm) change - Male	<94 cm	.312
	94-102 cm	.008
	>102 cm	.000
Waist circumference (cm) change - Female	<80 cm	.273
	80-88 cm	.292
	>88 cm	.000

Biomarkers before and after the campaign

Biomarkers change *	Categories	P-value
PPGT (mg/dl)	≤180	0.000
	>180	0.000
Cholesterol (mg/dl)	<200	0.000
	≥200	0.000
Systolic (mmHg)	<140	0.277
	≥140	0.000
Diastolic (mmHg)	<90	0.001
	≥90	0.000

*considered controlled: PPGT ≤180, cholesterol <200, HT <140/<90

Effect of interventions on outcome variables

outcome variables	Interventions variables*		
	educational sessions	cooking sessions	exercise sessions
Reduction in weight (Kg)	0.024**	0.000	0.258
BMI	0.004	0.000	0.006
Waist Circumference	0.001	0.458	0.065
PPGT	0.00	0.001	0.119
Cholesterol	0.174	0.141	0.004
*adjust for confounders (sex, age, smoking control status and obese)			
**significance P-value <0.05			

Participants behaviors improvement

- A significant change in patient cooking practices was observed. Based on patients questionnaire feedback.
- Significant increase in the number of meals consumed a day was observed

Conclusion

➤ **This campaign proved to:**

- Help patients improve their knowledge about diabetes and adapting healthy lifestyle.
- Improvement in weight, waist circumference & blood sugar level. Due to conducting a variety of sessions.
- It enabled HC staff to improve knowledge & counseling skills in the management of diabetic patients.

➤ **Such campaigns need to be sustained and expanded to other HCs with more efforts on strengthening partnership with NGOs and local community.**

Activities during campaign launching

Entertainment play: Zaal & Khadra

Cooking show



UNRWA Commissioner-General on a Palestine TV for healthy "maqlubeh" recipe



Cooking sessions



Exercise sessions



Educational sessions

