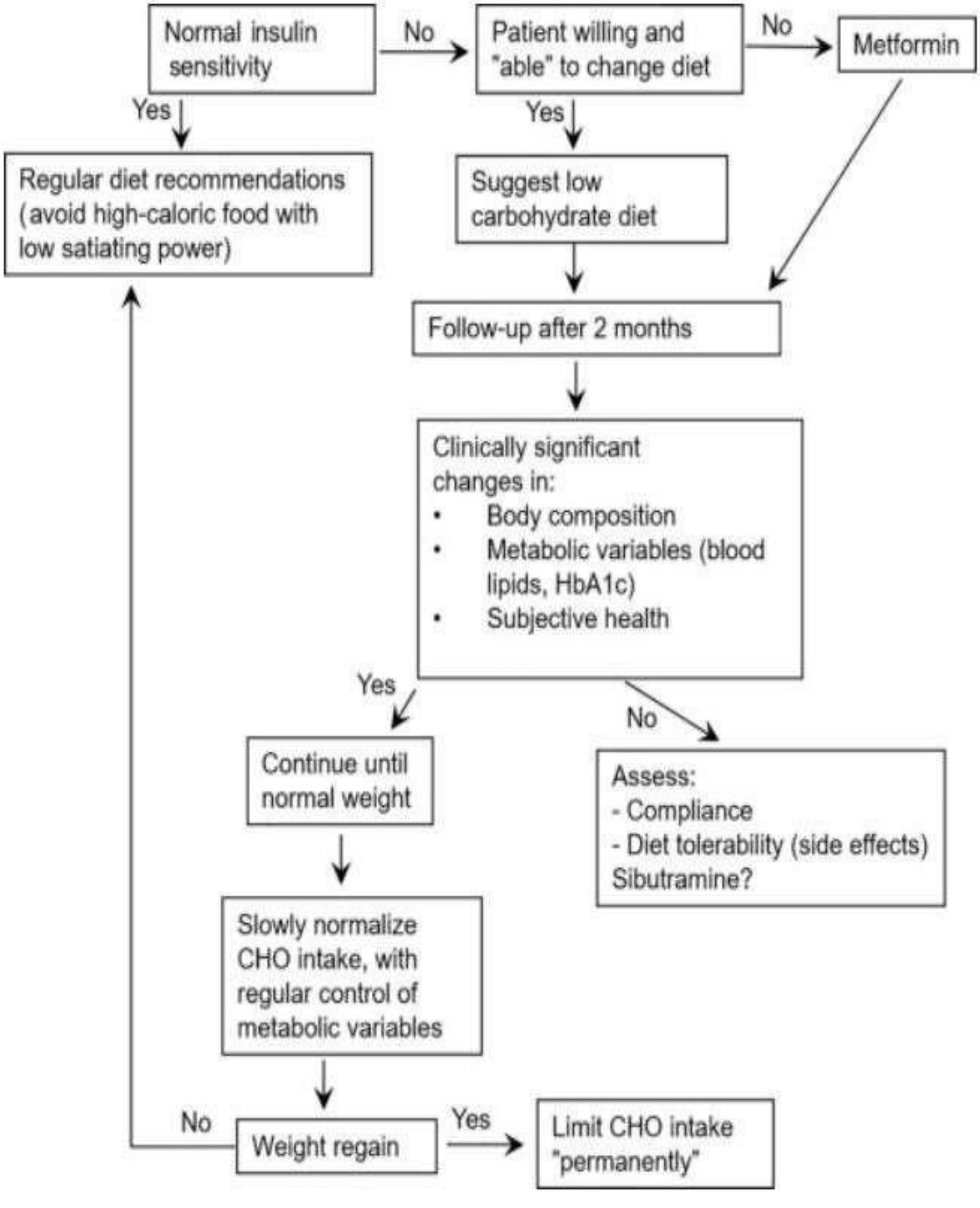
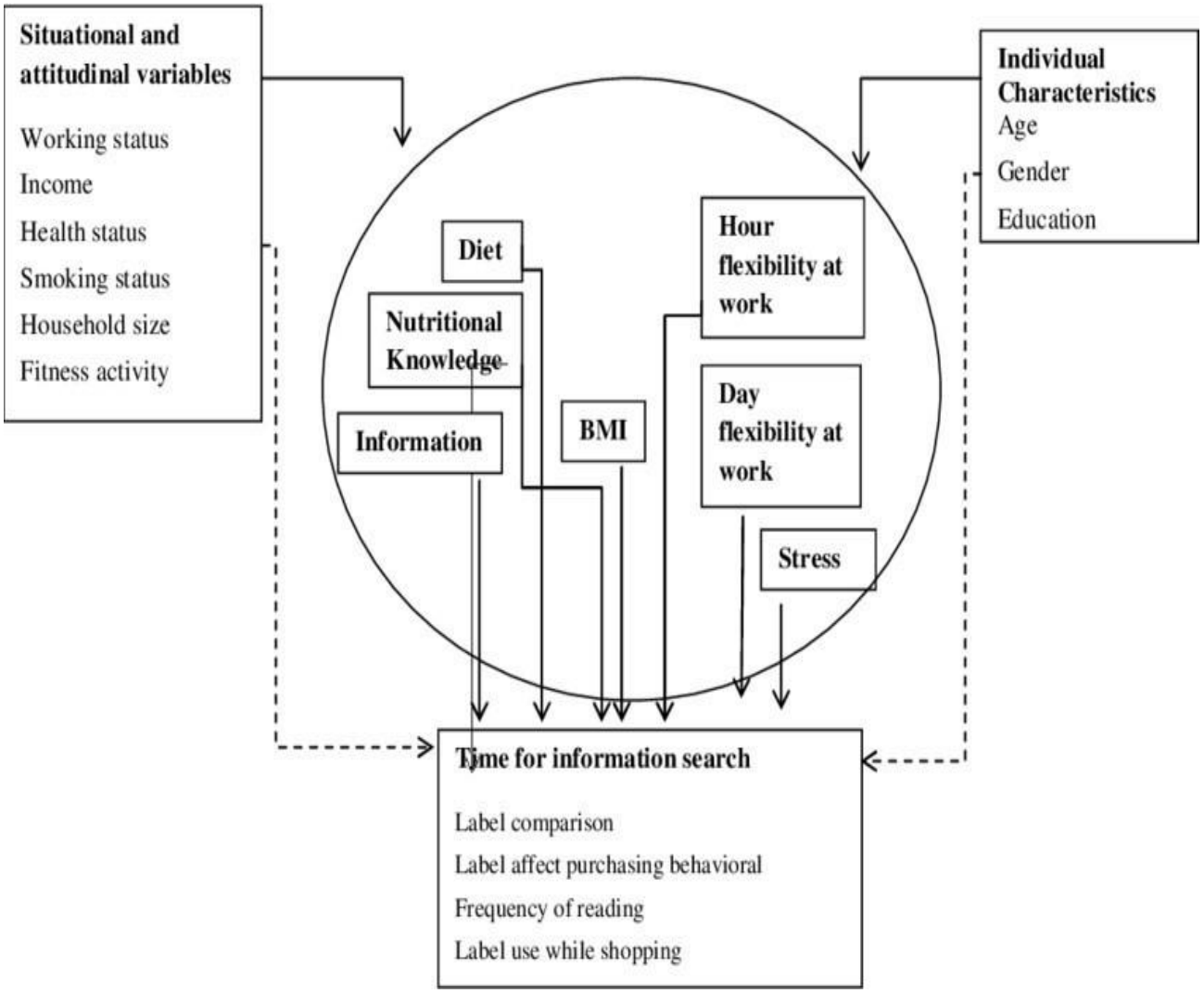
Analysis, Interpretation and Modelling:

DATE	20-11-2022
TEAM ID	PNT2022TMID43508
PROJECT NAME	AI-POWERED NUTRITION ANALYZER FOR FITNESS ENTHUSIASTICS



PROBLEM SOLUTION DIAGRAM:



Components	**Emerging Technologies**	**Food**	**Results**
Proteins	High pressure processing	Tomatoes, carrotsand broccoli	little loss of healthy compounds, an increased glucose retardation index, and water retention.
	High intensity ultrasound	Whey	Charge enhancement, hydrophobicity, surface activity, emulsifying abilities, solubility, foaming potential, and flexibility.
Carbohydrates	Ultrasounds	Grape pomace	increased hemicellulose, mannan, xylene, and xyloglucan extraction yield in less time
	Ultrasounds	Barley	Increased ultrasoundintensity resulted in highest recovery yield and smaller β- glucan molecules
Essential minerals	High pressure processing, highpressure homogenization	Soybean, smoothies,milk, carrots	Changes in minerals balance and solubilization of macromolecules (e.g., protein) associated with them

Polyphenols	High Pressure Processing	Blackberry and strawberry purées	Preservation of the color , anthocyanins content and antioxidant activity of purées
Vitamins	γ-irradiation	Potatoes	Reduction in VitaminC