Results

ANOVA

ANOVA - Life expectancy

Cases	Sum of Squares	df	Mean Square	F	p
Status	13065.164	1	13065.164	256.004	< .001
BMI_cat	3329.649	2	1664.825	32.621	< .001
Status ✻ BMI_cat	4462.725	2	2231.363	43.722	< .001
Residuals	147490.906	2890	51.035		

Note. Type III Sum of Squares

I ran a two-way ANOVA to test the impact of BMI (treated categorically as either low, average, or high) and status (as a developing or developed country) on average life expectancy.

There was a main effect of both status ($F(1,2890) = 13065$, $p < .001$) and BMI ($F(2,2890) = 1664$, $p < .001$), such that developed nations ($M = 79.20$ years) had a larger life expectancy than developing nations ($M = 67.11$ years) and countries with high BMI have an average life expectancy ($M = 72.93$ years) greater than countries with low ($M = 63.55$) and average BMIs ($M = 60.50$). Notably, both of these main effects are subsumed by an interaction between BMI and status ($F(2,2890) = 2231$, $p < .001$), such that BMI is associated with average life expectancy in developing nations. Developed counties have roughly the same average life expectancy regardless of BMI (see table).

Descriptives

Descriptives - Life expectancy

Status	BMI_cat	Mean	SD	N
Developed	average	81.829	0.423	7
	high	79.132	3.892	454
	low	79.424	4.425	51
Developing	average	60.047	7.309	331
	high	70.988	6.913	1446
	low	62.217	9.349	607

Descriptives plots