Table S1. Descriptive statistics of physicochemical parameters of drinking water in the study area along with the comparison of WHO 2011 guidelines [34].

		Temperature	Turbidity	Color	pH	Alkalinity	Chloride	Total Hardness	EC	TDS	Nitrate	R/Cl	Coliform no./100mL	E.Coli no./100mL
	WHO 2011 [34]	—ºC	1.5 NTU	> 5 HZU	6.5-8.5	—	250 mg L^{-1}	500 mg L^{-1}	— ɯS cm^{-1}	1000 mg L^{-1}	50 mg L^{-1}	Min 0.2-max 0.5	Negative	NEGATIVE
Karachi Malir (n=30)	**Range**	2.5-32.2	0.8-45	1-10	6.8-9.5	40-1890	1.96-3240	70-3840	0.38-1854	1.33-8960	0-1	0-0.25	0-1	0-1
	Mean±Std.Dev	27.86±5.24	4.02±7.85	4.1±2.28	7.36±7.54	443.07±439.28	582.39±801.85	772.4±934.1	147.73±409.15	1921.344±2306.45	0.63±0.49	0.008±0.046	0.033±0.183	0.033±0.183
Karachi West (n=31)	**Range**	22.5-31.5	1-50.6	2-30	6.4-8.9	1.5-1750	68-2210	140-4460	0.4-1654	200-8710	0-1	0-2	0-1	0-1
	Mean±Std.Dev	26.9±2.54	6.37±11.1	5.29±6.96	7.41±0.47	213.27±311.15	350.77±494.95	613.71±887.88	149.31+-354.62	1307.94±1861.78	0.516±0.508	0.097±0.380	0.032±0.18	0.032±0.18
Karachi East (n=30)	**Range**	19.1-32.2	1-9.9	1-90	6.6-8.4	20-1604	40-1578	70-3020	0.15-7320	3.9-4684	0-1	0-0.5	0-1	0-1
	Mean±Std.Dev	27.75±2.85	3.44±2.03	6.47±15.89	7.34±0.41	209.63±297.75	258.73±333.63	419.97±643.33	410.75±1441.48	849.53±1038.63	0.37±0.49	0.025±0.10	0.033±0.183	0.033±0.183
Karachi South (n=30)	**Range**	23-31	1-9.9	1-10	6.5-8.4	84-2050	48-2120	140-3540	0.62-1016	261-4000	0-1	0-0.15	0-1	0-1
	Mean±Std.Dev	27.46±2.29	3.4±2.15	3.43±2.01	7.4±0.48	289.8±403.15	364.03±460.1	458±654.09	43.85±189.21	848.37±809.36	0.27±0.45	0.005±0.03	0.2±0.41	0.033±0.183
Karachi Central (n=31)	**Range**	25.2-31.7	0.5-17.8	1-16	7-10	64-2050	32-2670	96-2260	0.38-8390	157-5369	0-1	0-1	0-45	0-4
	Mean±Std.Dev	28.24±2.08	3.38±3.53	3.97±3.14	7.56±0.67	269.29±416.15	270.94±504.92	340.39±416.34	694.49±1592.47	809.74±1155.02	0.23±0.43	0.07±0.25	3.65±10.94	0.19±0.75

Table S2. Displays the geographical attributes of sampled locations.

Malir		Karachi West		Karachi East		Karachi South		Karachi Central	
Latitude	Longitude	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude
24.894476°	67.215371°	24.971141°	66.951104°	24.873133°	67.106038°	25.110315°	67.239138°	24.954362°	67.058405°
24.899257°	67.215461°	24.976011°	66.950895°	24.871498°	67.100638°	25.103778°	67.270468°	24.961369°	67.063987°
24.902770°	67.209363°	24.975253°	66.945942°	24.873896°	67.096289°	25.091714°	67.235368°	24.962252°	67.052140°
24.909962°	67.209836°	24.970503°	66.954840°	24.868724°	67.105284°	25.085388°	67.263082°	24.954244°	67.046232°
24.909212°	67.222043°	24.968009°	66.947041°	24.865462°	67.090398°	25.073735°	67.251474°	24.949235°	67.051936°
24.907957°	67.201514°	24.966433°	66.951341°	24.866981°	67.097029°	25.095739°	67.209964°	24.946307°	67.060404°
24.902619°	67.199849°	24.965543°	66.948273°	24.870897°	67.089785°	25.075830°	67.219979°	24.953622°	67.068401°
24.898925°	67.204732°	24.968654°	66.941851°	24.878004°	67.103635°	25.063035°	67.280162°	24.937549°	67.054710°
24.893029°	67.203406°	24.965037°	66.941950°	24.881447°	67.110407°	25.054458°	67.265821°	24.940893°	67.043876°
24.894604°	67.197096°	24.963042°	66.944874°	24.877936°	67.112400°	25.054426°	67.237753°	24.951958°	67.035155°
24.889846°	67.208809°	24.961855°	66.950907°	24.871914°	67.112720°	25.063398°	67.210456°	24.937935°	67.066083°
24.891052°	67.198903°	24.963689°	66.954591°	24.879857°	67.098500°	25.084831°	67.292877°	24.945359°	67.076552°
24.901932°	67.192252°	24.973321°	66.942241°	24.879023°	67.093197°	25.030207°	67.235690°	24.958777°	67.083445°
24.889354°	67.217334°	24.971703°	66.936786°	24.876987°	67.089018°	25.038575°	67.206347°	24.936939°	67.057837°
24.887657°	67.203283°	24.977291°	66.937799°	24.891239°	67.118197°	25.130418°	67.236091°	24.933540°	67.069101°
24.888163°	67.191138°	24.981533°	66.945535°	24.895584°	67.098732°	25.075643°	67.181193°	24.944947°	67.080655°
24.895771°	67.183846°	24.978130°	66.956243°	24.884886°	67.090910°	25.117525°	67.193253°	24.943226°	67.072443°
24.887419°	67.181857°	24.972640°	66.960085°	24.884155°	67.120277°	25.102133°	67.171477°	24.942705°	67.042019°
24.879429°	67.198586°	24.966521°	66.933801°	24.889265°	67.105540°	25.030022°	67.270663°	24.956060°	67.084900°
24.881682°	67.189222°	24.975521°	66.933194°	24.893435°	67.111733°	25.074495°	67.271623°	24.928044°	67.060731°
24.910291°	67.190183°	24.971315°	66.931026°	24.879455°	67.119324°	25.049625°	67.180520°	24.929083°	67.046881°
24.900822°	67.224267°	24.982973°	66.953053°	24.876818°	67.121604°	25.017905°	67.290631°	24.954367°	67.076427°
24.896777°	67.173182°	24.968661°	66.965217°	24.886010°	67.098457°	25.010987°	67.211737°	24.929134°	67.077931°
24.892023°	67.169015°	24.963893°	66.963450°	24.888183°	67.113198°	25.148811°	67.166470°	24.948466°	67.042507°
24.887218°	67.170107°	24.959984°	66.958481°	24.881512°	67.087113°	25.005676°	67.258038°	24.924698°	67.070810°
24.880872°	67.208627°	24.956990°	66.952524°	24.882708°	67.125727°	25.022185°	67.190399°	24.924695°	67.054378°
24.874654°	67.197420°	24.953247°	66.945562°	24.873594°	67.118925°	25.059540°	67.147419°	24.921002°	67.060102°
24.878649°	67.189579°	24.958638°	66.936715°	24.891536°	67.094117°	25.046564°	67.354992°	24.940165°	67.093480°
24.873968°	67.184282°	24.948784°	66.937043°	24.864492°	67.103634°	24.994073°	67.263498°	24.937804°	67.083612°
24.879668°	67.176907°	24.949034°	66.951050°	24.866965°	67.112931°	25.153158°	67.201775°	24.927944°	67.088430°
		24.953841°	66.959071°					24.923670°	67.083236°