

Table 1: Summary of the preparation of the data and the studied attributes

Studied variable type	Attributes' Summary			Description of the transformation and preparation of the attributes for FCA
	Dataset Name	Generated number of attributes	Lattice name	
target variable	Q092	2	Q092_Y, Q092_N	The attribute was one-hot encoded, where presence of a diagnosed depressive disorder and absence of a diagnosed depressive disorder were created, and it is marked according with diagnosed depressive disorder status of the instance.
	A02201	1	A02201_N	The attribute was binarized, and it is marked when one does not have a pet animal.
	C001	1	C001_	The attribute was binarized, and it is marked when one lives alone.
	C006	2	C006_F, C006_F	The attribute was one-hot encoded, where male and female attributes were created and they are marked according with the sex of the instance data.
	C008	3	C008_YA, C008_A, C008_OA	The attribute was binning and one-hot encoded, where young adults (18-24), adults (25-59), and older adults (greater than 59) attributes were created, and they are marked according with the age range of the instance.
	C009	2	C009_W, C009_NW	The attribute was discretized by category aggregation and one-hot encoded, where white and non-white (black, mixed race, asian, and brazilian Indigenous people) were created, and they are marked according with the race of the instance.
	M01401, M01501	1	M01401_M01501	The attributes were composed and binarized, and it is marked when one does not have any friends or family people to rely on.
	M01601, M01701, M01801, M01901	1	M01601_to_M01901	The attributes were composed and binarized, and it is marked when one is social isolated, that is, has not been engaging in any social activities (sports activities, physical exercises, recreational activities, artistic pursuits, religion activities, or community-style movements) in the last twelve months.
other variables	N00101	2	N00101_, N00101_N	The attribute was one-hot encoded, where perceived good health status (good or very good) and non-perceived good health status (otherwise) were created, and they are marked according with the perceived good health status instance.
	N010	1	N010_	The attribute was binarized, and it is marked when one has been sleep problems, such as difficulty falling asleep, waking up frequently at night, or sleeping more than usual more than half of the days in the last two weeks.
	N011, N012, N013	1	N011_to_N013	The attributes were composed and binarized, and it is marked when one does not feel motivated, interested, or have trouble concentrating on getting things done or carrying out usual activities more than half of the days in the last two weeks.
	N014	1	N014_	The attribute was binarized, and it is marked when one has eating problems more than half of the days in the last two weeks.
	N016	1	N016_	The attribute was binarized, and it is marked when one has felt depressed, down, or without hope more than half of the days in the last two weeks.

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Studied variable type	Attributes' Summary			Description of the transformation and preparation of the attributes for FCA
	Dataset Name	Generated number of attributes	Lattice name	
other variables	N017	1	N017_	The attribute was binarized, and it is marked when one has felt bad about yourself, considered yourself a failure, or felt that you disappointed your family more than half of the days in the last two weeks.
	N018	1	N018_	The attribute was binarized, and it is marked when one has thoughts about hurting yourself in some way or thought it would be better to be dead more than half of the days in the last two weeks.
	P00104, P00404	1	P00104_P00404	The attributes were composed and binarized, and it is marked when one has obesity of any degree.
	P00901	1	P00901_N	The attribute was binarized, and it is marked when one has not eaten any type of vegetable or less than once a week.
	P018	1	P018_N	The attribute was binarized, and it is marked when one has not eaten any type of fruits or less than once a week.
	P02002, P02501	1	P02002_P02501	The attributes were composed and binarized, and it is marked when one has eaten sugar foods or soft drink frequently (at least four times a week).
	P027	1	P027_N	The attribute was binarized, and it is marked when one does not consume any alcoholic beverage.
	P02801, P029	1	P02801_P029	The attributes were composed and binarized, and it is marked when one has frequently consumed alcohol beverage (eight or more drinks per week for women and 15 or more drinks per week for men).
	P034	1	P034_N	The attribute was binarized, and it is marked when one does not have engaged in any type of physical exercise or sport in the last three months.
	P035	1	P035_	The attribute was binarized, and it is marked when one has engaged in any type of physical exercise or sport at least three times a week in the last three months.
	P050	1	P050_	The attribute was binarized, and it is marked when one has smoked tobacco.
	Q00201	1	Q00201_	The attribute was binarized, and it is marked when one has been ever diagnosed with hypertension (high blood pressure) by a doctor.
	Q03001	1	Q03001_	The attribute was binarized, and it is marked when one has been ever diagnosed with diabetes by a doctor.
	Q060	1	Q060_	The attribute was binarized, and it is marked when one has been ever diagnosed with high cholesterol by a doctor.
	Q06306	1	Q06306_	The attribute was binarized, and it is marked when one has been ever diagnosed with a heart condition by a doctor, such as a heart attack, angina, heart failure, or another.
	Q068	1	Q068_	The attribute was binarized, and it is marked when one has been ever diagnosed with a stroke (cerebrovascular accident) or brain hemorrhage by a doctor.

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Attributes' Summary				Description of the transformation and preparation of the attributes for FCA
Studied variable type	Dataset Name	Generated number of attributes	Lattice name	
other variables	Q074	1	Q074_	The attribute was binarized, and it is marked when one has been ever diagnosed with asthma or asthmatic bronchitis by a doctor.
	Q079	1	Q079_	The attribute was binarized, and it is marked when one has been ever diagnosed with arthritis or rheumatism by a doctor.
	Q084	1	Q084_	The attribute was binarized, and it is marked when one has chronic back problems.
	Q088	1	Q088_	The attribute was binarized, and it is marked when one has been ever diagnosed with repetitive strain injury (RSI) by a doctor.
	Q11006	1	Q11006_	The attribute was binarized, and it is marked when one has been ever diagnosed with another mental illness by a doctor. or health professional.
	Q11604	1	Q11604_	The attribute was binarized, and it is marked when one has been ever diagnosed with chronic lung disease by a doctor, such as emphysema, chronic bronchitis, or COPD (Chronic Obstructive Pulmonary Disease).
	Q120	1	Q120_	The attribute was binarized, and it is marked when one has been ever diagnosed with cancer by a doctor.
	Q124	1	Q124_	The attribute was binarized, and it is marked when one has been ever diagnosed with chronic kidney failure by a doctor.
	Q132	1	Q132_	The attribute was binarized, and it is marked when one has used any medication to help to sleep.
	V00201	1	V00201_	The attribute was binarized, and it is marked when one has been offended, humiliated, or ridiculed in front of others.
	V00203	1	V00203_	The attribute was binarized, and it is marked when one has been threatened, offended, insulted on their social media, or had their images shared without consent.
	V01401, V01402, V01403	1	V01401_to_V01403	The attributes were combined and binarized, and it is marked when one has suffered physical aggression, such as assault by punching, kicking, being dragged by the hair, or pushing, or any other physical action intended to cause harm.
	V01404, V01405	1	V01404_V01405	The attributes were combined and binarized, and it is marked when one has suffered severe physical aggression, such as strangulation, asphyxiation, intentional burning, injury by firearm, knife, or other objects.
	V02701, V02702	1	V02701_V02702	The attributes were combined and binarized, and it is marked when one has ever experienced sexual abuse.
	V02801, V02802	1	V02801_V02802	The attributes were combined and binarized, and it is marked when one has experienced sexual abuse in the last two months.
	VDD004A	1	VDD004A_	The attribute was combined and binarized, and it is marked when one has completed higher education.
	VDF004	1	VDF004_	The attribute was combined and binarized, and it is marked when one is low income (earning less than one minimum wage).
Total				52