In [1]:

```python
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

import warnings
warnings.filterwarnings("ignore")
```

In [2]:

```python
df =pd.read_csv('DemographicData.csv')
```

In [3]:

```python
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 195 entries, 0 to 194
Data columns (total 6 columns):
 #   Column                 Non-Null Count  Dtype
---  ------                 --------------  -----
 0   Country Name           195 non-null    object
 1   Country Code           195 non-null    object
 2   Birth rate             195 non-null    float64
 3   Internet access        195 non-null    float64
 4   Income Group           195 non-null    object
 5   BirthRateClassification  195 non-null  object
dtypes: float64(2), object(4)
memory usage: 9.3+ KB
```

In [4]:

```python
df.head()
```

Out[4]:

	Country Name	Country Code	Birth rate	Internet access	Income Group	BirthRateClassification
0	Aruba	ABW	10.244	78.9	High income	LBR
1	Afghanistan	AFG	35.253	5.9	Low income	HBR
2	Angola	AGO	45.985	19.1	Upper middle income	HBR
3	Albania	ALB	12.877	57.2	Upper middle income	LBR
4	United Arab Emirates	ARE	11.044	88.0	High income	LBR

In [5]:

```python
df.columns = ['Country Name','Country Code','BR','IA','IG','BRC']
```

In [6]:

```
df.tail()
```

Out[6]:

	Country Name	Country Code	BR	IA	IG	BRC
190	Yemen, Rep.	YEM	32.947	20.0	Lower middle income	HBR
191	South Africa	ZAF	20.850	46.5	Upper middle income	HBR
192	Congo, Dem. Rep.	COD	42.394	2.2	Low income	HBR
193	Zambia	ZMB	40.471	15.4	Lower middle income	HBR
194	Zimbabwe	ZWE	35.715	18.5	Low income	HBR

In [20]:

```
df.groupby(['IG']).aggregate({'BR':'mean','IA':'mean'}).sort_values(by=['BR'],ascending=False
```

Out[20]:

	BR	IA
IG		
Low income	37.238267	5.988333
Lower middle income	26.309140	22.366386
Upper middle income	18.740646	40.279577
High income	12.753433	74.231684

In [10]:

```
df.corr(method = 'pearson' , min_periods = 1, numeric_only = True)
```

Out[10]:

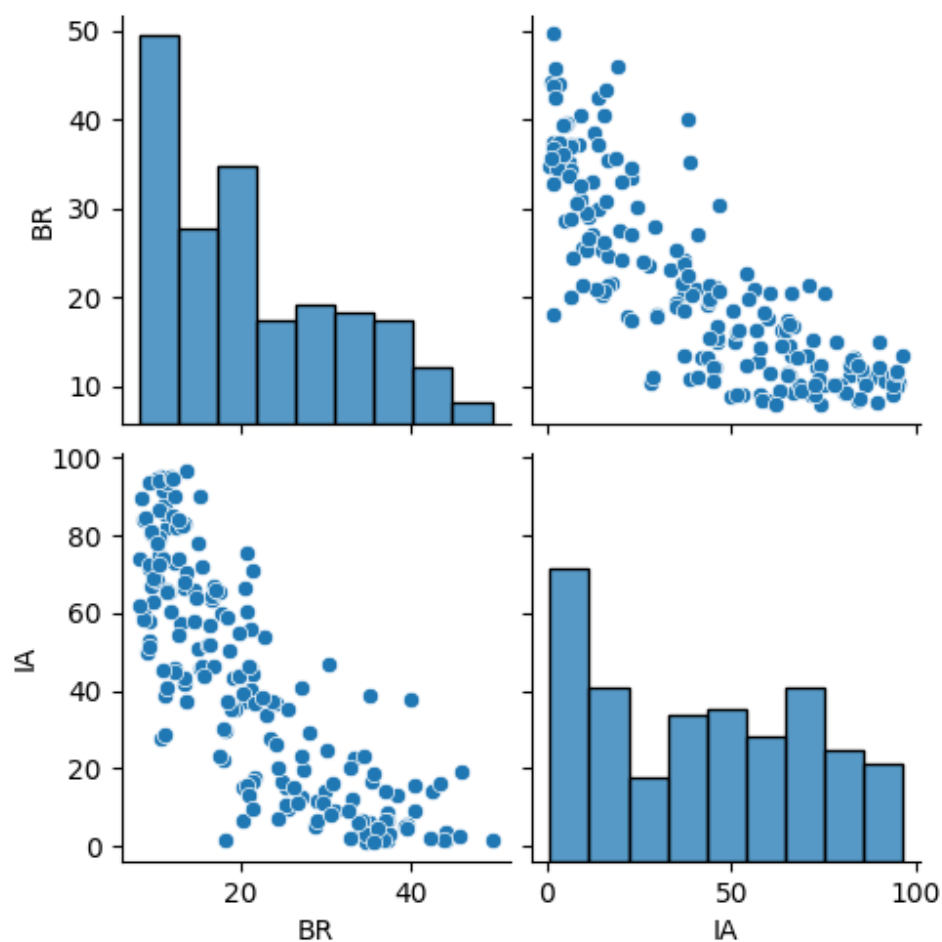|	BR	IA
BR	1.000000	-0.815589
IA	-0.815589	1.000000

In [11]:

```
sns.pairplot(df)
```

Out[11]:
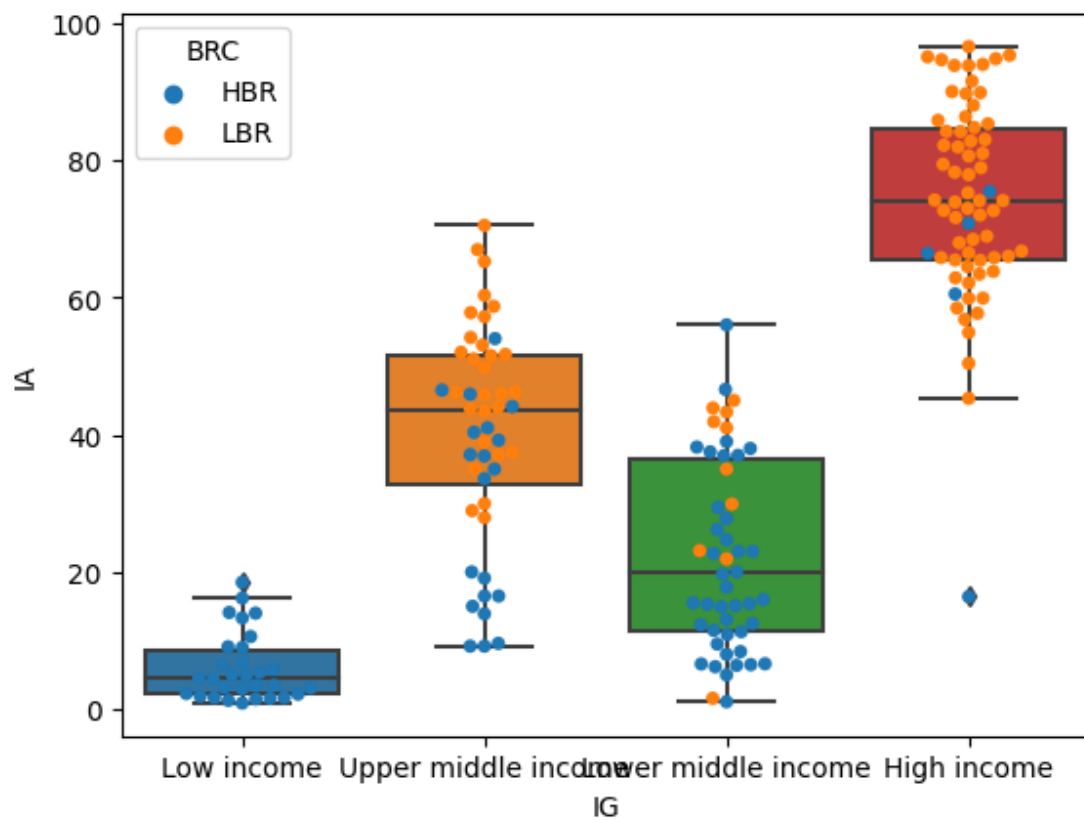
<seaborn.axisgrid.PairGrid at 0x1cc2ab95f90>

In [18]:

```
ax = sns.swarmplot(x='IG',y='IA', data = df, hue = 'BRC')
sns.boxplot(x='IG',y='IA', data = df, ax=ax)
```
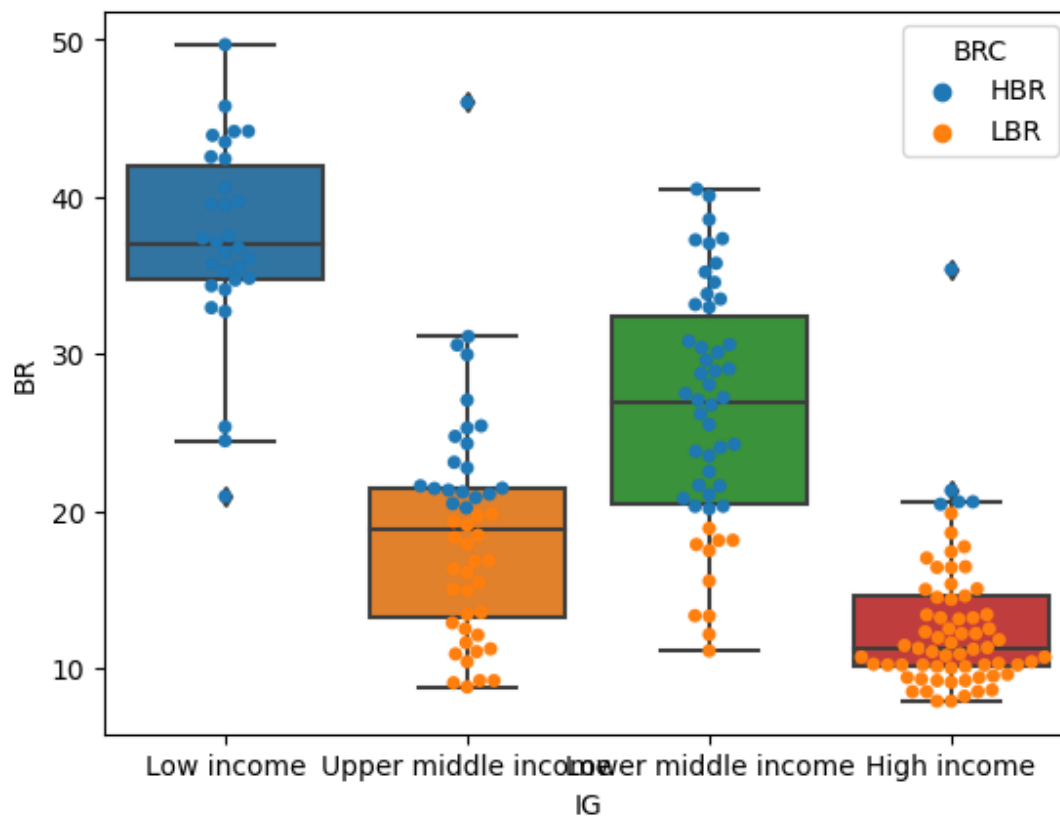
Out[18]:

```
<Axes: xlabel='IG', ylabel='IA'>
```

In [21]:

```python
ax = sns.swarmplot(x='IG',y='BR', data = df, hue = 'BRC')
sns.boxplot(x='IG',y='BR', data = df, ax=ax)
```
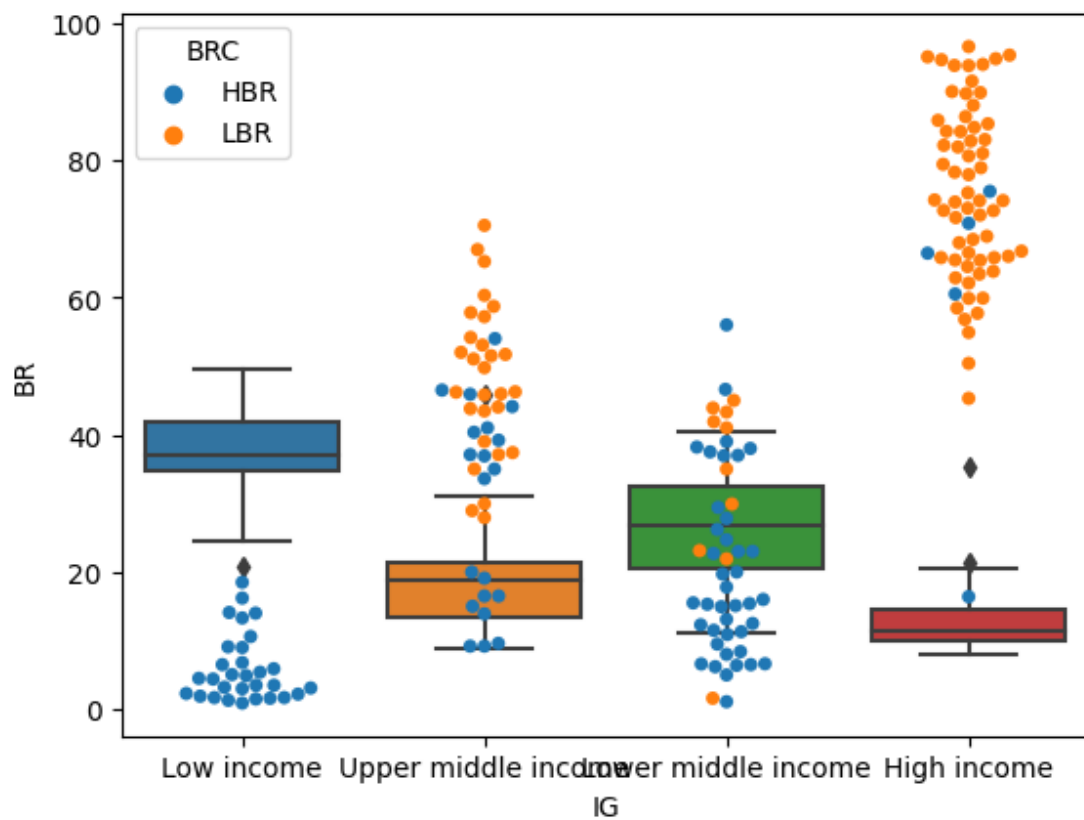
Out[21]:

```
<Axes: xlabel='IG', ylabel='BR'>
```

In [22]:

```
ax = sns.swarmplot(x='IG',y='IA', data = df, hue = 'BRC')
sns.boxplot(x='IG',y='BR', data = df, ax=ax)
```

Out[22]:

```
<Axes: xlabel='IG', ylabel='BR'>
```


In [ ]: