In [1]:
```
import pandas as pd
import seaborn as sns
import warnings
warnings.filterwarnings('ignore')
```

In [2]:
```
df = sns.load_dataset('titanic')
df
```

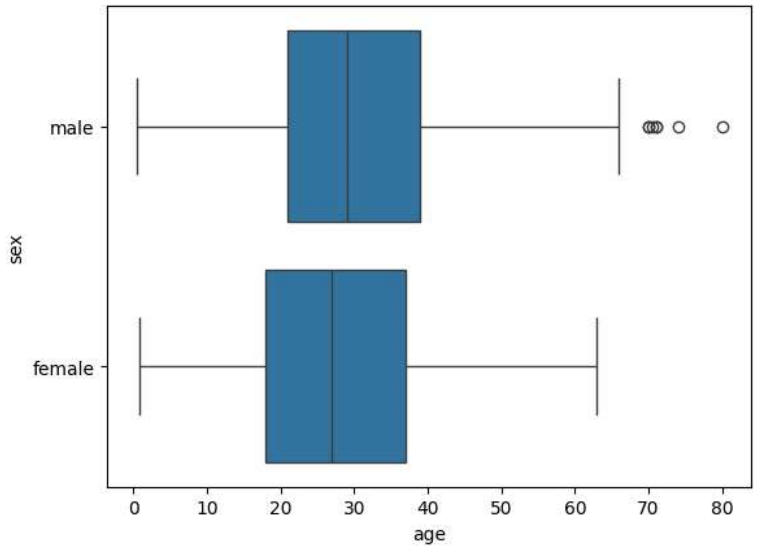
Out[2]:

	survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	ad
0	0	3	male	22.0	1	0	7.2500	S	Third	man	
1	1	1	female	38.0	1	0	71.2833	C	First	woman	
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	
3	1	1	female	35.0	1	0	53.1000	S	First	woman	
4	0	3	male	35.0	0	0	8.0500	S	Third	man	
...	...	...	...	...	...	...	...	...	...	...	
886	0	2	male	27.0	0	0	13.0000	S	Second	man	
887	1	1	female	19.0	0	0	30.0000	S	First	woman	
888	0	3	female	NaN	1	2	23.4500	S	Third	woman	
889	1	1	male	26.0	0	0	30.0000	C	First	man	
890	0	3	male	32.0	0	0	7.7500	Q	Third	man	

891 rows × 15 columns

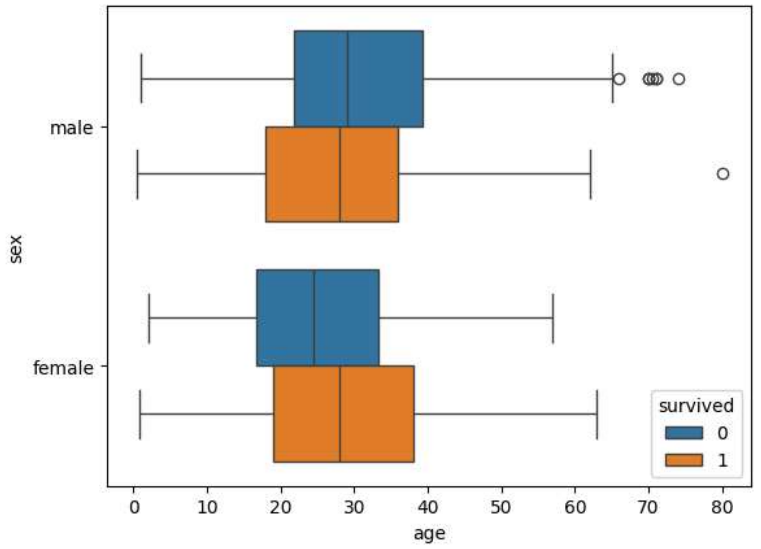
In [3]:
```
sns.boxplot(x='age', y='sex', data=df)
```

Out[3]:
```
<Axes: xlabel='age', ylabel='sex'>
```

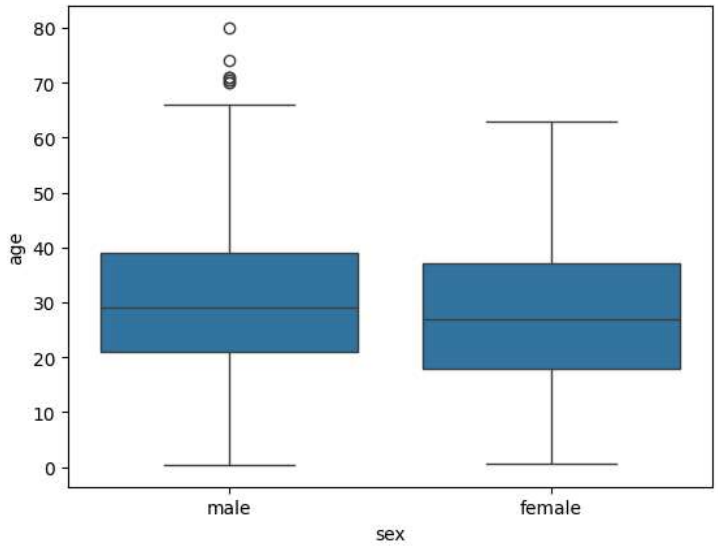
In [4]:
```
sns.boxplot(x='age', y='sex', hue='survived', data=df)
```

Out[4]:
```
<Axes: xlabel='age', ylabel='sex'>
```



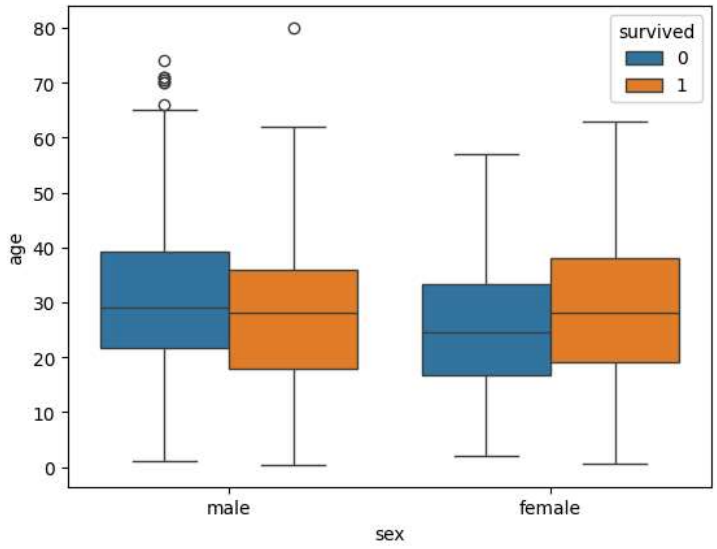
In [5]:
```
sns.boxplot(y='age', x='sex', data=df)
```

Out[5]: <Axes: xlabel='sex', ylabel='age'>



In [6]:
```
sns.boxplot(y='age', x='sex', hue='survived', data=df)
```

Out[6]: <Axes: xlabel='sex', ylabel='age'>



In [7]:
```
data = df.iloc[:,2:4]
data
```

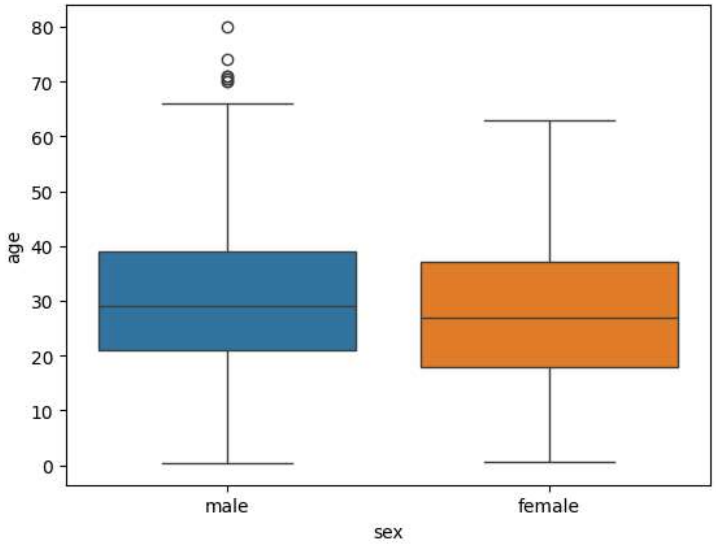
Out[7]:

	sex	age
0	male	22.0
1	female	38.0
2	female	26.0
3	female	35.0
4	male	35.0
...	...	...
886	male	27.0
887	female	19.0
888	female	NaN
889	male	26.0
890	male	32.0

891 rows × 2 columns

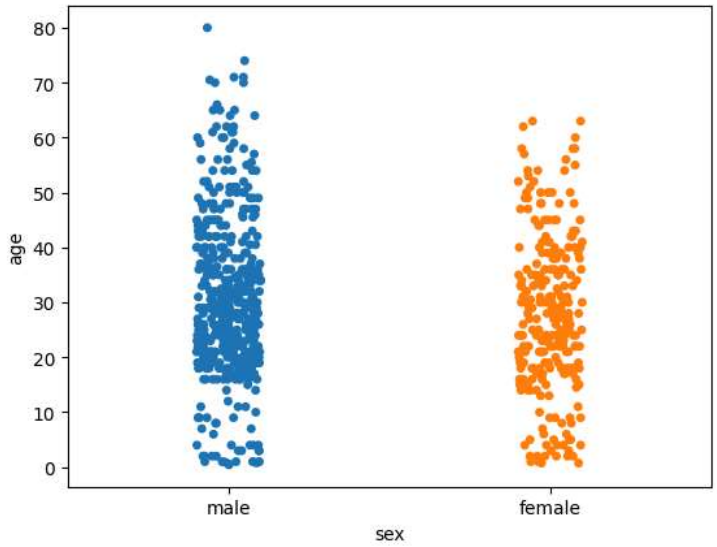
In [8]:
```
sns.boxplot(y='age', x='sex', hue='sex', data=data)
```

Out[8]: <Axes: xlabel='sex', ylabel='age'>



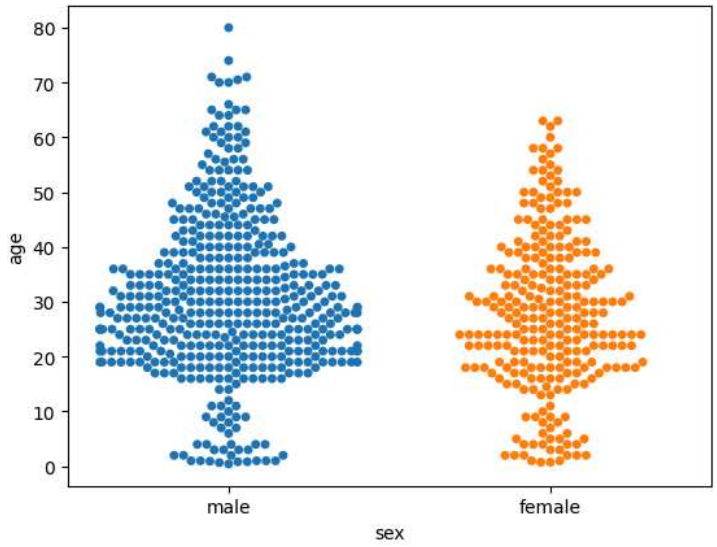
In [9]:
```
sns.stripplot(y='age', x='sex', hue='sex', data=data)
```

Out[9]: <Axes: xlabel='sex', ylabel='age'>



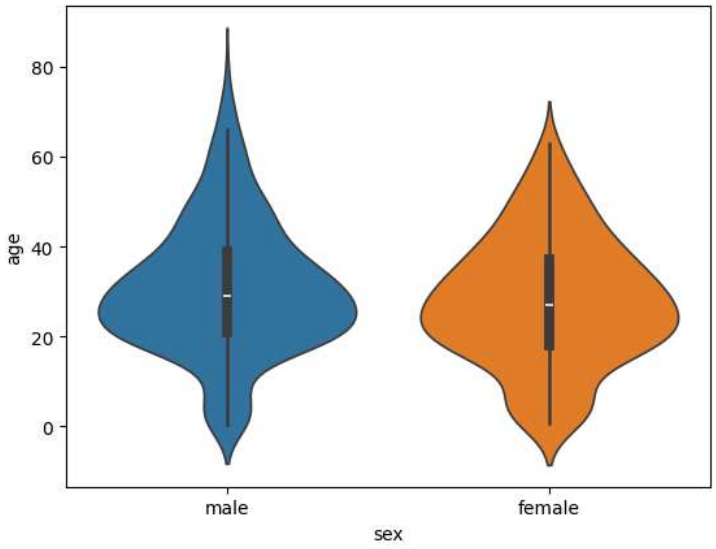
In [10]:
```
sns.swarmplot(y='age', x='sex', hue='sex', data=data)
```

Out[10]: <Axes: xlabel='sex', ylabel='age'>



In [11]:
```
sns.violinplot(y='age', x='sex', hue='sex', data=data)
```

Out[11]: <Axes: xlabel='sex', ylabel='age'>



In [12]:
```
data_male = data[data['sex']=='male']
data_female = data[data['sex']=='female']
```

In [13]:
```
data_male.describe()
```

Out[13]:

	age
count	453.000000
mean	30.726645
std	14.678201
min	0.420000
25%	21.000000
50%	29.000000
75%	39.000000
max	80.000000

In [14]:
```
data_female.describe()
```


Out[14]:

	age
count	261.000000
mean	27.915709
std	14.110146
min	0.750000
25%	18.000000
50%	27.000000
75%	37.000000
max	63.000000

In [15]:
```
male_q1 = data_male['age'].quantile(0.25)
male_q3 = data_male['age'].quantile(0.75)
male_iqr = male_q3 - male_q1
print(male_q1)
print(male_q3)
print(male_iqr)
```

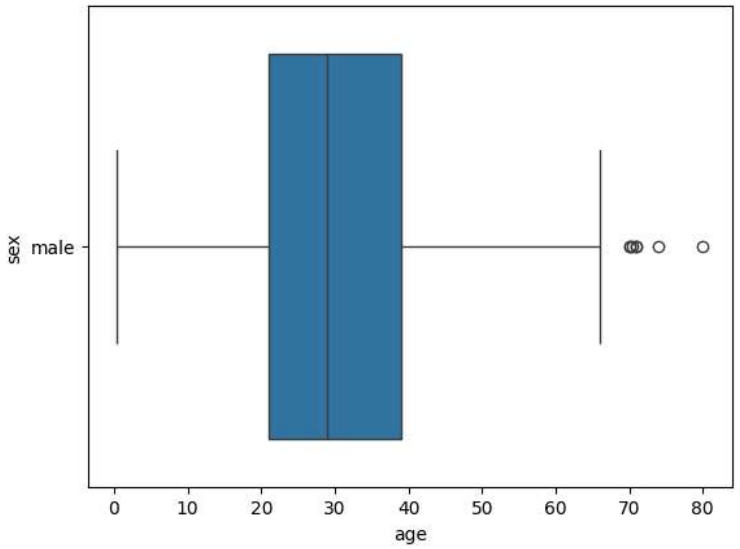
```
21.0
39.0
18.0
```

In [16]:
```
female_q1 = data_female['age'].quantile(0.25)
female_q3 = data_female['age'].quantile(0.75)
female_iqr = female_q3 - female_q1
print(female_q1)
print(female_q3)
print(female_iqr)
```

```
18.0
37.0
19.0
```

In [17]:
```
sns.boxplot(x='age', y='sex', data=data_male)
```

Out[17]: <Axes: xlabel='age', ylabel='sex'>



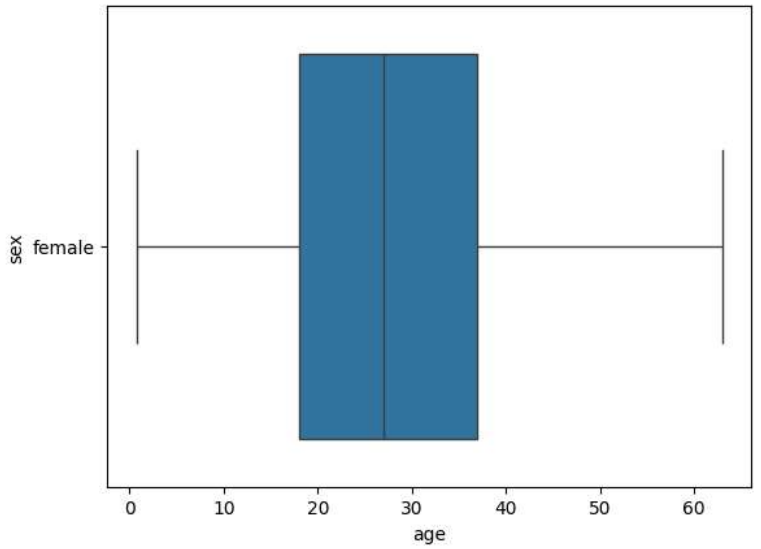
In [18]:
```
upper_fence_male = male_q3 + (male_iqr*1.5)
outliers_male = []
for i in data_male['age']:
    if i>upper_fence_male:
        outliers_male.append(i)

print(len(outliers_male))
```

7

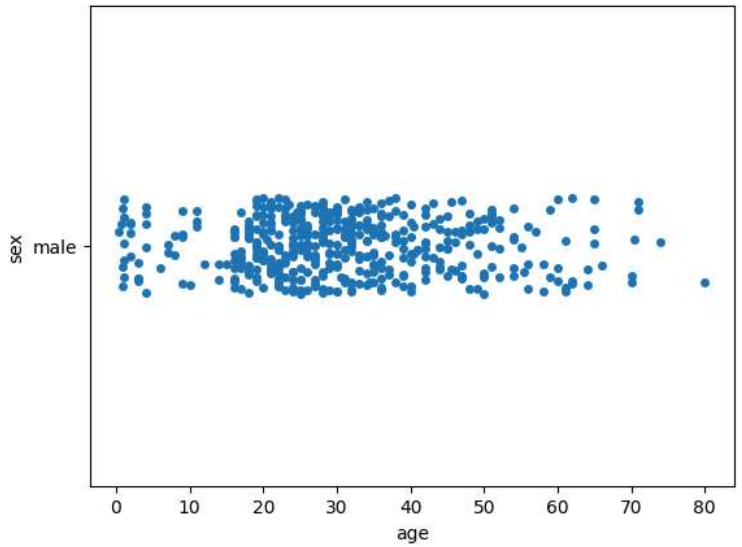
In [19]:
```
sns.boxplot(x='age', y='sex', data=data_female)
```

Out[19]: <Axes: xlabel='age', ylabel='sex'>



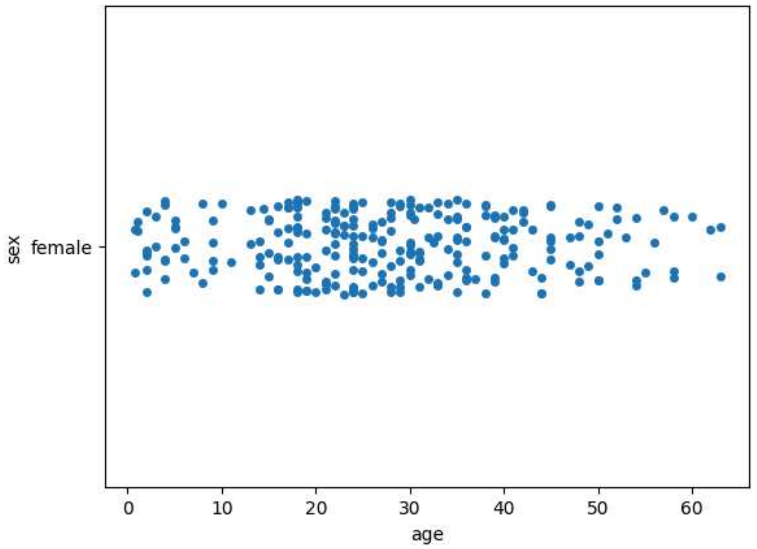
In [20]:
```
sns.stripplot(x='age', y='sex', data=data_male)
```

Out[20]: <Axes: xlabel='age', ylabel='sex'>



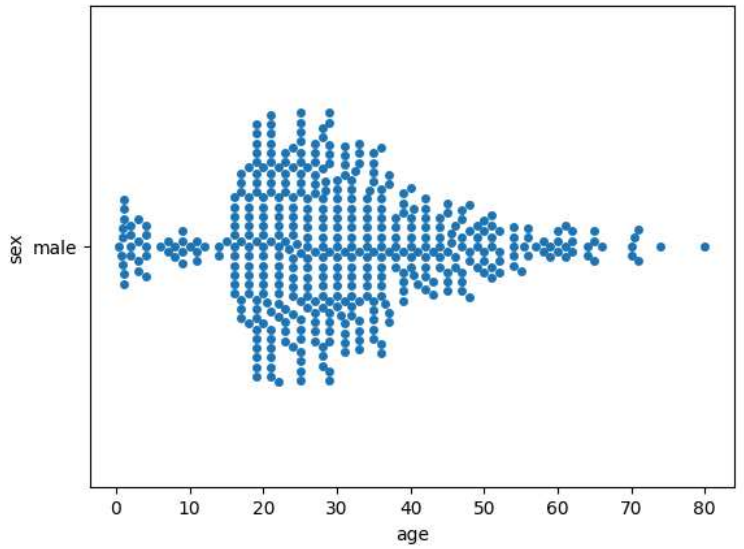
In [21]:
```
sns.stripplot(x='age', y='sex', data=data_female)
```

Out[21]: <Axes: xlabel='age', ylabel='sex'>



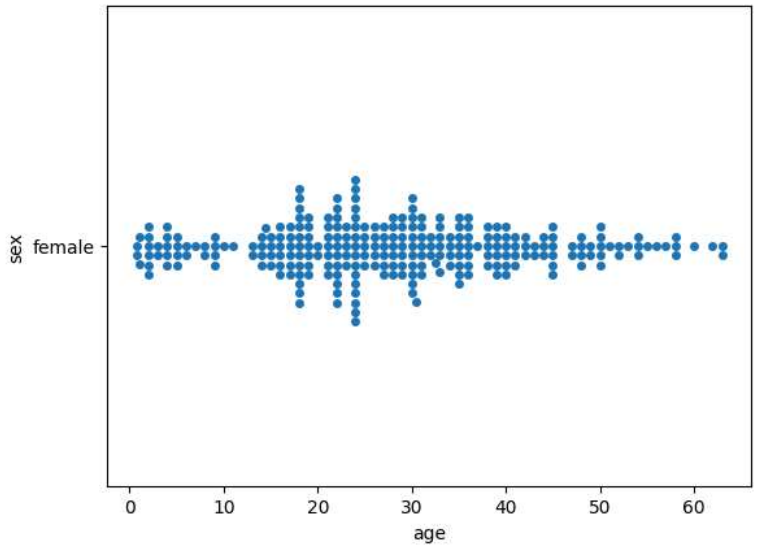
In [22]:
```
sns.swarmplot(x='age', y='sex', data=data_male)
```

Out[22]: <Axes: xlabel='age', ylabel='sex'>



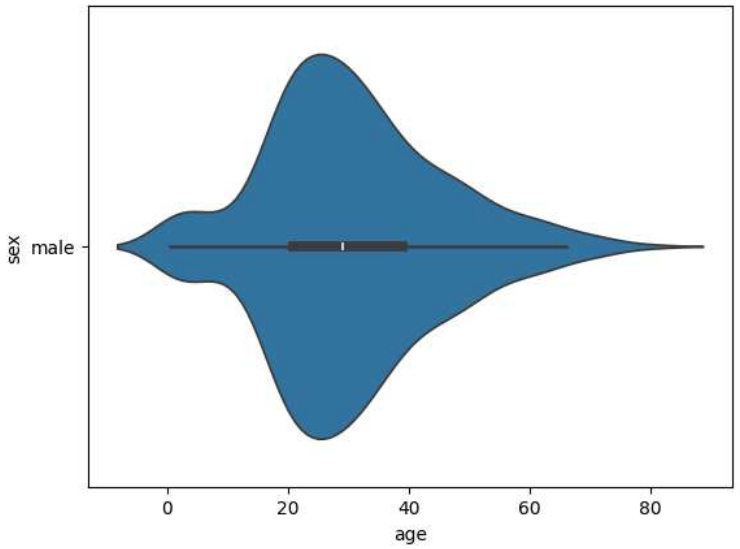
In [23]:
```
sns.swarmplot(x='age', y='sex', data=data_female)
```

Out[23]: <Axes: xlabel='age', ylabel='sex'>



In [24]:
```
sns.violinplot(x='age', y='sex', data=data_male)
```

Out[24]: <Axes: xlabel='age', ylabel='sex'>



In [25]:
```
sns.violinplot(x='age', y='sex', data=data_female)
```

Out[25]: <Axes: xlabel='age', ylabel='sex'>