In [34]:

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

In [3]:

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

df=df.sample(2000) # 2000개 sampling
df=df.rename(columns={'p0317':'p_fulltime'}) # 행 이름 변경

# 결측치 제거
df[df['p_fulltime']<0]=np.NaN
df=df.dropna(subset=['p_fulltime'],axis=0)
df
```

Out[3]:

```
           hhid          pid  wave    year  p_age  p_edu  p_employ_type  p_ind2017  p_job_begin  p_job_status  ...  p_jobtype  p_married  p_r
20473  203495.0  20349501.0  25.0  2022.0   53.0    6.0            1.0      851.0       2022m7           2.0  ...        1.0        1.0
 1989    8316.0    108404.0  25.0  2022.0   41.0    6.0            1.0      473.0       2008m4           1.0  ...        1.0        2.0
12513  100294.0  10029402.0  25.0  2022.0   61.0    2.0            1.0       14.0       2022m1           2.0  ...        1.0        2.0
18911  202524.0  20252403.0  25.0  2022.0   37.0    6.0            1.0      701.0       2013m3           1.0  ...        1.0        2.0
 4186    2303.0    230304.0  25.0  2022.0   31.0    4.0            1.0      861.0       2021m1           1.0  ...        1.0        1.0
  ...       ...         ...   ...     ...    ...    ...            ...        ...          ...           ...  ...        ...        ...
 8785    4702.0    470203.0  25.0  2022.0   32.0    6.0            1.0      241.0      2018m10           1.0  ...        1.0        1.0
 4290    2352.0    235202.0  25.0  2022.0   60.0    5.0            1.0      471.0       2021m8           2.0  ...        1.0        2.0
 7530    4058.0    405801.0  25.0  2022.0   70.0    2.0            1.0      682.0       2021m1           1.0  ...        1.0        2.0
 8660    6960.0    462603.0  25.0  2022.0   44.0    6.0            1.0      872.0       2011m9           1.0  ...        1.0        2.0
15335  200465.0  20046501.0  25.0  2022.0   71.0    2.0            1.0      969.0       2010m3           3.0  ...        1.0        3.0

837 rows × 21 columns
```

In [4]:

```python
# 성별에 따른 임금 평균
sex_wage=df.groupby('p_sex', as_index=False)\
           .agg(mean_wage=('p_wage','mean'))
sex_wage
```

Out[4]:

```
   p_sex   mean_wage
0    1.0  346.419753
1    2.0  212.504298
```

In [5]:

```python
sex_wage_result = df.groupby('p_sex',as_index=False).p_wage.agg(['mean', 'std','sum','median','min', 'max', 'cour
sex_wage_result
```

Out[5]:

```
             mean         std       sum  median   min     max  count
p_sex
  1.0  346.419753  205.459116  168360.0   300.0  27.0  3000.0    486
  2.0  212.504298  163.022187   74164.0   200.0  20.0  2400.0    349
```

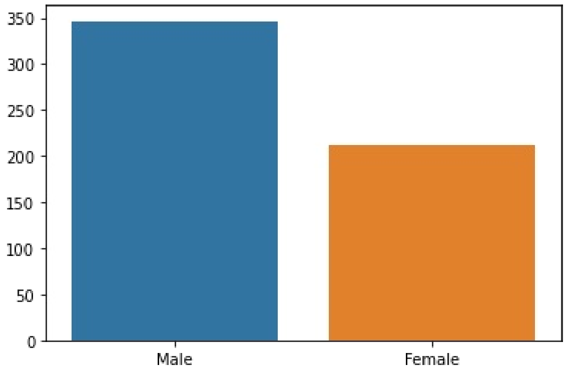
In [6]:

```python
# mean_p_wage1=sex_wage_result['mean'][0]
mean_p_wage1 = sex_wage_result.iloc[0]['mean']

mean_p_wage1  # male 평균 임금

mean_p_wage2 = sex_wage_result.iloc[1]['mean']

mean_p_wage2 # female 평균 임금
```

```
x=['Male','Female']
y=[mean_p_wage1,mean_p_wage2] # [male_mean, female_mean] #y축 설정


sns.barplot(data=sex_wage_result, x=x, y=y) #그래프 시각화
```

Out[6]:

```
<AxesSubplot:>
```



In [7]:

```
sex_wage_edu=df.groupby(['p_sex','p_edu'], as_index=False).agg(mean_wage=('p_wage','mean'))
# 성별에 따른 임금 차이 + 교란요인 교육수준 추가

sex_wage_edu
```

Out[7]:

	p_sex	p_edu	mean_wage
0	1.0	2.0	216.560976
1	1.0	3.0	298.934211
2	1.0	4.0	324.423077
3	1.0	5.0	332.593023
4	1.0	6.0	425.441989
5	2.0	1.0	36.500000
6	2.0	2.0	114.916667
7	2.0	3.0	187.703297
8	2.0	4.0	166.166667
9	2.0	5.0	227.671642
10	2.0	6.0	294.126126

In [8]:

```
sex_wage_edu_fulltime= df.groupby(['p_sex','p_edu','p_fulltime'], as_index=False).agg(mean_wage=('p_wage','mean')
# 성별,교육에 따른 임금 차이 + 교란요인 정규직 여부 추가

sex_wage_edu_fulltime
```

Out[8]:

	p_sex	p_edu	p_fulltime	mean_wage
0	1.0	2.0	1.0	320.454545
1	1.0	2.0	2.0	178.466667
2	1.0	3.0	1.0	340.043478
3	1.0	3.0	2.0	235.900000
4	1.0	4.0	1.0	338.000000
5	1.0	4.0	2.0	161.500000
6	1.0	5.0	1.0	371.938462
7	1.0	5.0	2.0	210.809524
8	1.0	6.0	1.0	448.880503
9	1.0	6.0	2.0	256.045455
10	2.0	1.0	2.0	36.500000
11	2.0	2.0	1.0	185.571429
12	2.0	2.0	2.0	105.584906
13	2.0	3.0	1.0	238.190476

14	2.0	3.0	2.0	144.428571
15	2.0	4.0	1.0	262.000000
16	2.0	4.0	2.0	97.714286
17	2.0	5.0	1.0	251.460000
18	2.0	5.0	2.0	157.705882
19	2.0	6.0	1.0	319.875000
20	2.0	6.0	2.0	195.608696

In [9]:

```
# 연령대 범주 설정 및 데이터 재할당

age=df.assign(age=np.where(df['p_age']<20,'10s',
                  np.where(df['p_age']<30,'20s',
                  np.where(df['p_age']<40,'30s',
                  np.where(df['p_age']<50,'40s',
                  np.where(df['p_age']<60,'50s',
                            'more than 60s'))))))

age['age'].value_counts()
df2=pd.concat([df,age]) # age 추가
df2= df2.dropna(subset=['age'],axis=0) #결측치 제거
df2
```

Out[9]:

	hhid	pid	wave	year	p_age	p_edu	p_employ_type	p_ind2017	p_job_begin	p_job_status	...	p_married	p_region	p_se
20473	203495.0	20349501.0	25.0	2022.0	53.0	6.0	1.0	851.0	2022m7	2.0	...	1.0	1.0	2
1989	8316.0	108404.0	25.0	2022.0	41.0	6.0	1.0	473.0	2008m4	1.0	...	2.0	1.0	2
12513	100294.0	10029402.0	25.0	2022.0	61.0	2.0	1.0	14.0	2022m1	2.0	...	2.0	15.0	2
18911	202524.0	20252403.0	25.0	2022.0	37.0	6.0	1.0	701.0	2013m3	1.0	...	2.0	8.0	1
4186	2303.0	230304.0	25.0	2022.0	31.0	4.0	1.0	861.0	2021m1	1.0	...	1.0	5.0	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
8785	4702.0	470203.0	25.0	2022.0	32.0	6.0	1.0	241.0	2018m10	1.0	...	1.0	3.0	1
4290	2352.0	235202.0	25.0	2022.0	60.0	5.0	1.0	471.0	2021m8	2.0	...	2.0	5.0	2
7530	4058.0	405801.0	25.0	2022.0	70.0	2.0	1.0	682.0	2021m1	1.0	...	2.0	11.0	1
8660	6960.0	462603.0	25.0	2022.0	44.0	6.0	1.0	872.0	2011m9	1.0	...	2.0	14.0	2
15335	200465.0	20046501.0	25.0	2022.0	71.0	2.0	1.0	969.0	2010m3	3.0	...	3.0	8.0	2

837 rows × 22 columns

In [10]:

```
df2.head()
```

Out[10]:

	hhid	pid	wave	year	p_age	p_edu	p_employ_type	p_ind2017	p_job_begin	p_job_status	...	p_married	p_region	p_se
20473	203495.0	20349501.0	25.0	2022.0	53.0	6.0	1.0	851.0	2022m7	2.0	...	1.0	1.0	2
1989	8316.0	108404.0	25.0	2022.0	41.0	6.0	1.0	473.0	2008m4	1.0	...	2.0	1.0	2
12513	100294.0	10029402.0	25.0	2022.0	61.0	2.0	1.0	14.0	2022m1	2.0	...	2.0	15.0	2
18911	202524.0	20252403.0	25.0	2022.0	37.0	6.0	1.0	701.0	2013m3	1.0	...	2.0	8.0	1
4186	2303.0	230304.0	25.0	2022.0	31.0	4.0	1.0	861.0	2021m1	1.0	...	1.0	5.0	2

5 rows × 22 columns

In [11]:

```
#성별에 따른 임금 차이 + 교란요인 교육, 정규직 여부, 연령,지역,경제 수준 교육 추가

sex_wage_edu_fulltime_age_region_level= df2.groupby(['p_sex','p_edu','p_fulltime','age','p_region','p6615'],
                                                     as_index=False).agg(mean_wage=('p_wage','mean'))
sex_wage_edu_fulltime_age_region_level
```

Out[11]:

	p_sex	p_edu	p_fulltime	age	p_region	p6615	mean_wage
0	1.0	2.0	1.0	50s	1.0	5.0	280.0
1	1.0	2.0	1.0	50s	10.0	4.0	440.0
2	1.0	2.0	1.0	50s	15.0	3.0	500.0
3	1.0	2.0	1.0	more than 60s	2.0	5.0	250.0
4	1.0	2.0	1.0	more than 60s	5.0	4.0	500.0
...	...	...	...	...	...	...	...
571	2.0	6.0	2.0	50s	5.0	5.0	225.0
572	2.0	6.0	2.0	50s	8.0	4.0	175.0
573	2.0	6.0	2.0	50s	8.0	5.0	245.0
574	2.0	6.0	2.0	more than 60s	8.0	1.0	300.0
575	2.0	6.0	2.0	more than 60s	15.0	4.0	80.0

576 rows × 7 columns

In [12]:

```
# 행 이름 재설정
sex_wage_edu_fulltime_age_region_level = sex_wage_edu_fulltime_age_region_level.rename(columns={'p6615': 'p_econ

sex_wage_edu_fulltime_age_region_level
```

Out[12]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
0	1.0	2.0	1.0	50s	1.0	5.0	280.0
1	1.0	2.0	1.0	50s	10.0	4.0	440.0
2	1.0	2.0	1.0	50s	15.0	3.0	500.0
3	1.0	2.0	1.0	more than 60s	2.0	5.0	250.0
4	1.0	2.0	1.0	more than 60s	5.0	4.0	500.0
...	...	...	...	...	...	...	...
571	2.0	6.0	2.0	50s	5.0	5.0	225.0
572	2.0	6.0	2.0	50s	8.0	4.0	175.0
573	2.0	6.0	2.0	50s	8.0	5.0	245.0
574	2.0	6.0	2.0	more than 60s	8.0	1.0	300.0
575	2.0	6.0	2.0	more than 60s	15.0	4.0	80.0

576 rows × 7 columns

In [13]:

```
# 1 수도권: 서울 인천 경기
metroDf = sex_wage_edu_fulltime_age_region_level[(sex_wage_edu_fulltime_age_region_level['p_region'] == 1.0) |
                                                  (sex_wage_edu_fulltime_age_region_level['p_region'] == 5.0) |
                                                  (sex_wage_edu_fulltime_age_region_level['p_region'] == 8.0)].copy()

metroDf.loc[:, 'p_region'] = 1  # 수도권 1로 설정
metroDf
```

Out[13]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
0	1.0	2.0	1.0	50s	1	5.0	280.0
4	1.0	2.0	1.0	more than 60s	1	4.0	500.0
5	1.0	2.0	1.0	more than 60s	1	5.0	245.0
7	1.0	2.0	1.0	more than 60s	1	5.0	245.0
16	1.0	2.0	2.0	more than 60s	1	3.0	171.5
...	...	...	...	...	...	...	...
569	2.0	6.0	2.0	50s	1	4.0	25.0
571	2.0	6.0	2.0	50s	1	5.0	225.0
572	2.0	6.0	2.0	50s	1	4.0	175.0

573	2.0	6.0	2.0	50s	1	5.0	245.0
574	2.0	6.0	2.0	more than 60s	1	1.0	300.0

250 rows × 7 columns

In [14]:

```
# 2 비수도권: 나머지
nonMetroDf = sex_wage_edu_fulltime_age_region_level[(sex_wage_edu_fulltime_age_region_level['p_region'] != 1.0) &
                                                    (sex_wage_edu_fulltime_age_region_level['p_region'] != 5.0) &
                                                    (sex_wage_edu_fulltime_age_region_level['p_region'] != 8.0)].copy()
nonMetroDf.loc[:,'p_region']=2 # 비수도권 2로 설정

nonMetroDf
```

Out[14]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
1	1.0	2.0	1.0	50s	2	4.0	440.0
2	1.0	2.0	1.0	50s	2	3.0	500.0
3	1.0	2.0	1.0	more than 60s	2	5.0	250.0
6	1.0	2.0	1.0	more than 60s	2	4.0	230.0
8	1.0	2.0	1.0	more than 60s	2	4.0	340.0
...	...	...	...	...	...	...	...
564	2.0	6.0	2.0	30s	2	4.0	108.0
566	2.0	6.0	2.0	40s	2	3.0	164.0
568	2.0	6.0	2.0	40s	2	4.0	245.0
570	2.0	6.0	2.0	50s	2	6.0	205.0
575	2.0	6.0	2.0	more than 60s	2	4.0	80.0

326 rows × 7 columns

In [15]:

```
# 수도권, 비수도권 데이터 합치기
df3=pd.concat([metroDf, nonMetroDf])
df3
```

Out[15]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
0	1.0	2.0	1.0	50s	1	5.0	280.0
4	1.0	2.0	1.0	more than 60s	1	4.0	500.0
5	1.0	2.0	1.0	more than 60s	1	5.0	245.0
7	1.0	2.0	1.0	more than 60s	1	5.0	245.0
16	1.0	2.0	2.0	more than 60s	1	3.0	171.5
...	...	...	...	...	...	...	...
564	2.0	6.0	2.0	30s	2	4.0	108.0
566	2.0	6.0	2.0	40s	2	3.0	164.0
568	2.0	6.0	2.0	40s	2	4.0	245.0
570	2.0	6.0	2.0	50s	2	6.0	205.0
575	2.0	6.0	2.0	more than 60s	2	4.0	80.0

576 rows × 7 columns

In [16]:

```
# 남성 1로 설정
df3_male=df3[(df3['p_sex']==1.0)]
df3_male
```

Out[16]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
0	1.0	2.0	1.0	50s	1	5.0	280.0
4	1.0	2.0	1.0	more than 60s	1	4.0	500.0
5	1.0	2.0	1.0	more than 60s	1	5.0	245.0
7	1.0	2.0	1.0	more than 60s	1	5.0	245.0
16	1.0	2.0	2.0	more than 60s	1	3.0	171.5
...	...	...	...	...	...	...	...

314	1.0	6.0	2.0	30s	2	4.0	100.0
319	1.0	6.0	2.0	50s	2	6.0	180.0
321	1.0	6.0	2.0	50s	2	3.0	300.0
322	1.0	6.0	2.0	50s	2	5.0	380.0
324	1.0	6.0	2.0	more than 60s	2	5.0	27.0

328 rows × 7 columns

In [17]:

```
# 여성 2로 설정
df3_female=df3[(df3['p_sex']==2.0)]
df3_female
```

Out[17]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
328	2.0	1.0	2.0	more than 60s	1	5.0	27.0
336	2.0	2.0	1.0	50s	1	3.0	200.0
338	2.0	2.0	1.0	more than 60s	1	4.0	217.0
341	2.0	2.0	2.0	50s	1	5.0	90.0
342	2.0	2.0	2.0	50s	1	5.0	135.0
...	...	...	...	...	...	...	...
564	2.0	6.0	2.0	30s	2	4.0	108.0
566	2.0	6.0	2.0	40s	2	3.0	164.0
568	2.0	6.0	2.0	40s	2	4.0	245.0
570	2.0	6.0	2.0	50s	2	6.0	205.0
575	2.0	6.0	2.0	more than 60s	2	4.0	80.0

248 rows × 7 columns

In [18]:

```
df3
```

Out[18]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
0	1.0	2.0	1.0	50s	1	5.0	280.0
4	1.0	2.0	1.0	more than 60s	1	4.0	500.0
5	1.0	2.0	1.0	more than 60s	1	5.0	245.0
7	1.0	2.0	1.0	more than 60s	1	5.0	245.0
16	1.0	2.0	2.0	more than 60s	1	3.0	171.5
...	...	...	...	...	...	...	...
564	2.0	6.0	2.0	30s	2	4.0	108.0
566	2.0	6.0	2.0	40s	2	3.0	164.0
568	2.0	6.0	2.0	40s	2	4.0	245.0
570	2.0	6.0	2.0	50s	2	6.0	205.0
575	2.0	6.0	2.0	more than 60s	2	4.0	80.0

576 rows × 7 columns

In [19]:

```
# 경제적 지위 1 | 2 => 1로 설정
level1 = df3[(df3['p_economicLevel'] == 1.0) | (df3['p_economicLevel'] == 2.0)].copy()

level1
```

Out[19]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
66	1.0	3.0	1.0	50s	1	2.0	660.0
532	2.0	6.0	1.0	40s	1	1.0	700.0
574	2.0	6.0	2.0	more than 60s	1	1.0	300.0
203	1.0	5.0	1.0	more than 60s	2	2.0	200.0
253	1.0	6.0	1.0	30s	2	2.0	380.0
305	1.0	6.0	1.0	more than 60s	2	2.0	500.0

478	2.0	5.0	1.0	40s	2	2.0	300.0
481	2.0	5.0	1.0	50s	2	2.0	245.0

In [20]:

```
# 경제적 지위 3 | 4 => 2로 설정

level2 = df3[(df3['p_economicLevel'] == 3.0) | (df3['p_economicLevel'] == 4.0)].copy()
level2.loc[:, 'p_economicLevel'] = 2

level2.head()
```

Out[20]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
4	1.0	2.0	1.0	more than 60s	1	2	500.0
16	1.0	2.0	2.0	more than 60s	1	2	171.5
17	1.0	2.0	2.0	more than 60s	1	2	144.0
20	1.0	2.0	2.0	more than 60s	1	2	197.0
35	1.0	3.0	1.0	20s	1	2	300.0

In [21]:

```
# 경제적 지위 5 | 6 => 3으로 설정

level3 = df3[(df3['p_economicLevel'] == 5.0) | (df3['p_economicLevel'] == 6.0)].copy()
level3.loc[:, 'p_economicLevel'] = 3

level3
```

Out[21]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
0	1.0	2.0	1.0	50s	1	3	280.0
5	1.0	2.0	1.0	more than 60s	1	3	245.0
7	1.0	2.0	1.0	more than 60s	1	3	245.0
18	1.0	2.0	2.0	more than 60s	1	3	142.0
21	1.0	2.0	2.0	more than 60s	1	3	260.0
...	...	...	...	...	...	...	...
545	2.0	6.0	1.0	40s	2	3	293.0
550	2.0	6.0	1.0	50s	2	3	100.0
553	2.0	6.0	1.0	50s	2	3	200.0
555	2.0	6.0	1.0	more than 60s	2	3	200.0
570	2.0	6.0	2.0	50s	2	3	205.0

216 rows × 7 columns

In [22]:

```
# 경제적 지위 데이터 병합(1)
level12=pd.concat([level1,level2])
level12
```

Out[22]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
66	1.0	3.0	1.0	50s	1	2.0	660.0
532	2.0	6.0	1.0	40s	1	1.0	700.0
574	2.0	6.0	2.0	more than 60s	1	1.0	300.0
203	1.0	5.0	1.0	more than 60s	2	2.0	200.0
253	1.0	6.0	1.0	30s	2	2.0	380.0
...	...	...	...	...	...	...	...
563	2.0	6.0	2.0	30s	2	2.0	295.0
564	2.0	6.0	2.0	30s	2	2.0	108.0
566	2.0	6.0	2.0	40s	2	2.0	164.0
568	2.0	6.0	2.0	40s	2	2.0	245.0
575	2.0	6.0	2.0	more than 60s	2	2.0	80.0

360 rows × 7 columns

In [32]:

```
# 경제적 지위 데이터 병합(2)

df4=pd.concat([level12,level3])

df4 # 최종 데이터셋
```

Out[32]:

	p_sex	p_edu	p_fulltime	age	p_region	p_economicLevel	mean_wage
66	1.0	3.0	1.0	50s	1	2.0	660.0
532	2.0	6.0	1.0	40s	1	1.0	700.0
574	2.0	6.0	2.0	more than 60s	1	1.0	300.0
203	1.0	5.0	1.0	more than 60s	2	2.0	200.0
253	1.0	6.0	1.0	30s	2	2.0	380.0
...	...	...	...	...	...	...	...
545	2.0	6.0	1.0	40s	2	3.0	293.0
550	2.0	6.0	1.0	50s	2	3.0	100.0
553	2.0	6.0	1.0	50s	2	3.0	200.0
555	2.0	6.0	1.0	more than 60s	2	3.0	200.0
570	2.0	6.0	2.0	50s	2	3.0	205.0

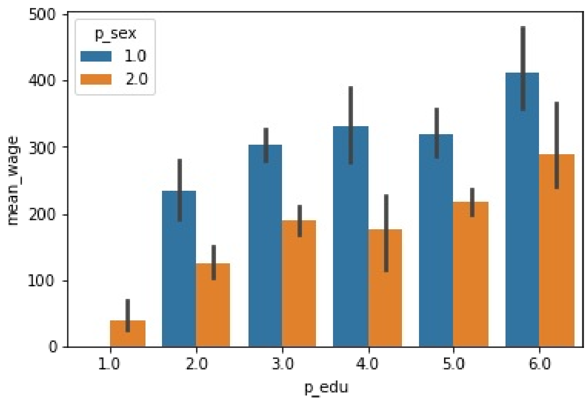
576 rows × 7 columns

In [24]:

```
# 그래프 그리기: 교육에 따른 평균 임금 성별 별로 시각화
sns.barplot(data=df4,x='p_edu',y='mean_wage',hue='p_sex')
```

Out[24]:

```
<AxesSubplot:xlabel='p_edu', ylabel='mean_wage'>
```

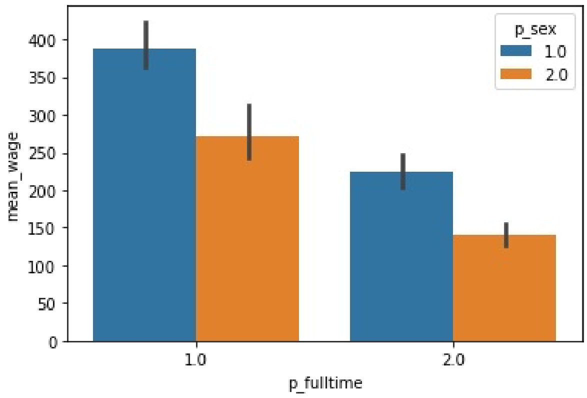


In [25]:

```
# 그래프 그리기: 정규직 여부에 따른 평균 임금 성별 별로 시각화

sns.barplot(data=df4,x='p_fulltime',y='mean_wage',hue='p_sex')
```

Out[25]:

```
<AxesSubplot:xlabel='p_fulltime', ylabel='mean_wage'>
```



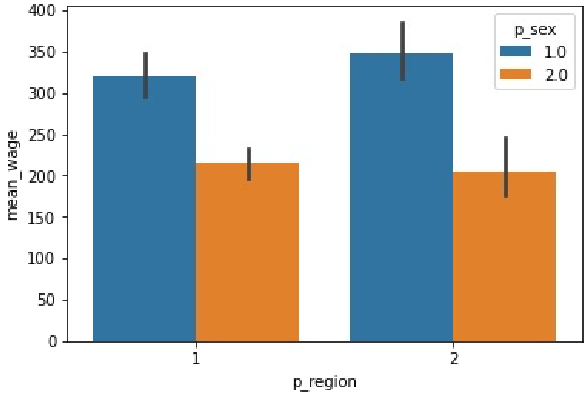
In [26]:

```
# 그래프 그리기: 거주 지역에 따른 평균 임금 성별 별로 시각화
```

```
sns.barplot(data=df4,x='p_region',y='mean_wage',hue='p_sex')
```

Out[26]:

```
<AxesSubplot:xlabel='p_region', ylabel='mean_wage'>
```

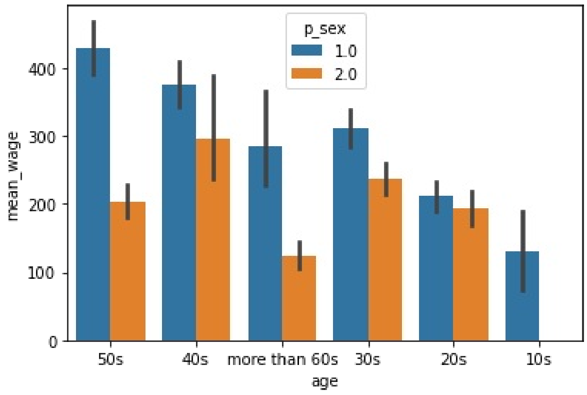


In [29]:

```
# 그래프 그리기: 연령대에 따른 평균 임금 성별 별로 시각화

sns.barplot(data=df4,x='age',y='mean_wage',hue='p_sex')
```

Out[29]:

```
<AxesSubplot:xlabel='age', ylabel='mean_wage'>
```

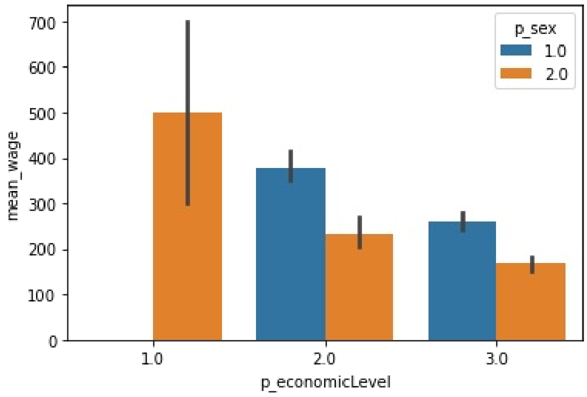


In [35]:

```
# 그래프 그리기: 경제적 지위에 따른 평균 임금 성별 별로 시각화

sns.barplot(data=df4,x='p_economicLevel',y='mean_wage',hue='p_sex')
```

Out[35]:

```
<AxesSubplot:xlabel='p_economicLevel', ylabel='mean_wage'>
```

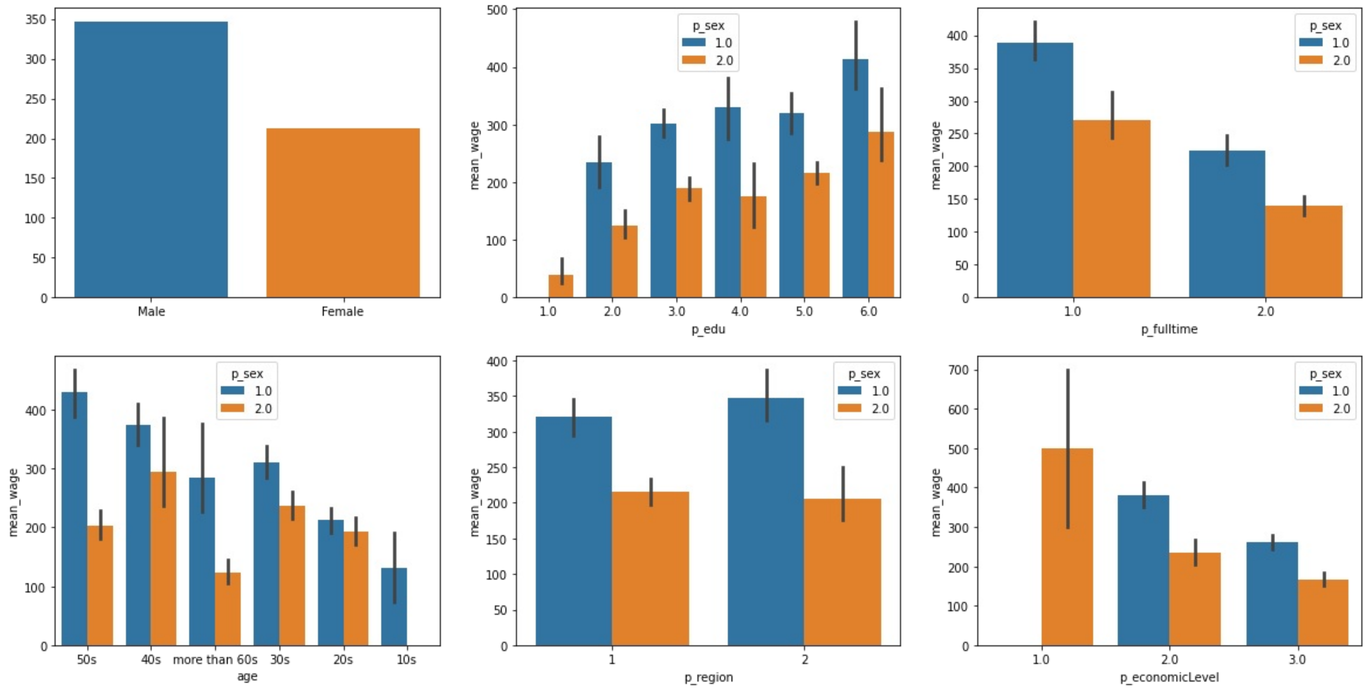


In [50]:

```
# 전체 그래프 시각화
fig, ax= plt.subplots(ncols=3,nrows=2, figsize=(20,10))
sns.barplot(data=sex_wage_result, x=x, y=y, ax=ax[0,0])
sns.barplot(data=df4,x='p_edu',y='mean_wage',hue='p_sex', ax=ax[0,1])
sns.barplot(data=df4,x='p_fulltime',y='mean_wage',hue='p_sex', ax=ax[0,2])
sns.barplot(data=df4,x='age',y='mean_wage',hue='p_sex', ax=ax[1,0])
sns.barplot(data=df4,x='p_region',y='mean_wage',hue='p_sex', ax=ax[1,1])
sns.barplot(data=df4,x='p_economicLevel',y='mean_wage',hue='p_sex', ax=ax[1,2])
```

Out[50]:

```
<AxesSubplot:xlabel='p_economicLevel', ylabel='mean_wage'>
```



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