

Two-Sample Kolmogorov-Smirnov Test

Two-Sample Kolmogorov-Smirnov Test
Test-specific data preparation and execution

```
>Warning # 4492 on line 12977 in column 42. Text: internet_bin  
>The (ADD) VALUE LABELS command included a symbol other than a value where a  
>value (either numeric or string) was expected. For compatibility with  
>previous systems, a parenthesized value would have been acceptable. All valu  
e  
>labels up to the next slash will be ignored.
```

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>Warning # 2004 on line 12981. Command name: SUBTITLE

>The subtitle given exceeds 60 characters in length. The first 60 characters
>will be used.

Two-sample Kolmogorov-Smirnov test
Maximum empirical-CDF separation in absences between female

NPar Tests

Notes

Output Created		16-JUL-2026 16:47:20
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Kolmogorov Smirnov Two Sample Test\dataset.csv
	Active Dataset	KolmogorovSmirnovTwoS ampleTestData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each test are based on all cases with valid data for the variable (s) used in that test.
Syntax		NPAR TESTS /K- S=absences BY sex_bin (0,1) /STATISTICS=DESCRIPT IVES QUARTILES.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.14
	Number of Cases Allowed ^a	449389

a. Based on availability of workspace memory.

[KolmogorovSmirnovTwoSampleTestData]

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Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles	
						25th	50th (Median)
absences	649	3.66	4.641	0	32	.00	2.00
sex_bin	649	.41	.492	0	1	.00	.00

Descriptive Statistics

	Percentiles
	75th
absences	6.00
sex_bin	1.00

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Frequencies

	sex_bin	N
absences	Female	383
	Male	266
	Total	649

Test Statistics^a

absences		
Most Extreme Differences	Absolute	.050
	Positive	.050
	Negative	-.013
Kolmogorov-Smirnov Z		.629
Asymp. Sig. (2-tailed)		.824

a. Grouping Variable: sex_bin

Explore

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Notes

Output Created		16-JUL-2026 16:47:21
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Kolmogorov Smirnov Two Sample Test\dataset.csv
	Active Dataset	KolmogorovSmirnovTwoS ampleTestData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=absences BY sex_bin /PLOT=HISTOGRAM NPLOT /STATISTICS=DESCRIPT IVES /NOTOTAL.
Resources	Processor Time	00:00:04.13
	Elapsed Time	00:00:04.49

sex_bin

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Case Processing Summary

		Valid		Cases Missing		Total	
	sex_bin	N	Percent	N	Percent	N	Percent
absences	Female	383	100.0%	0	0.0%	383	100.0%
	Male	266	100.0%	0	0.0%	266	100.0%

Descriptives

		sex_bin		Statistic	Std. Error
absences	Female	Mean		3.58	.239
		95% Confidence Interval for Mean	Lower Bound	3.11	
			Upper Bound	4.05	
		5% Trimmed Mean		2.99	
		Median		2.00	
		Variance		21.789	
		Std. Deviation		4.668	
		Minimum		0	
		Maximum		32	
		Range		32	
		Interquartile Range		5	
		Skewness		2.218	.125
		Kurtosis		7.208	.249
	Male	Mean		3.78	.283
		95% Confidence Interval for Mean	Lower Bound	3.22	
			Upper Bound	4.33	
		5% Trimmed Mean		3.23	
		Median		2.00	
		Variance		21.230	
		Std. Deviation		4.608	
		Minimum		0	
		Maximum		26	
		Range		26	
		Interquartile Range		6	
		Skewness		1.741	.149

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Descriptives

sex_bin		Statistic	Std. Error
Kurtosis		3.804	.298

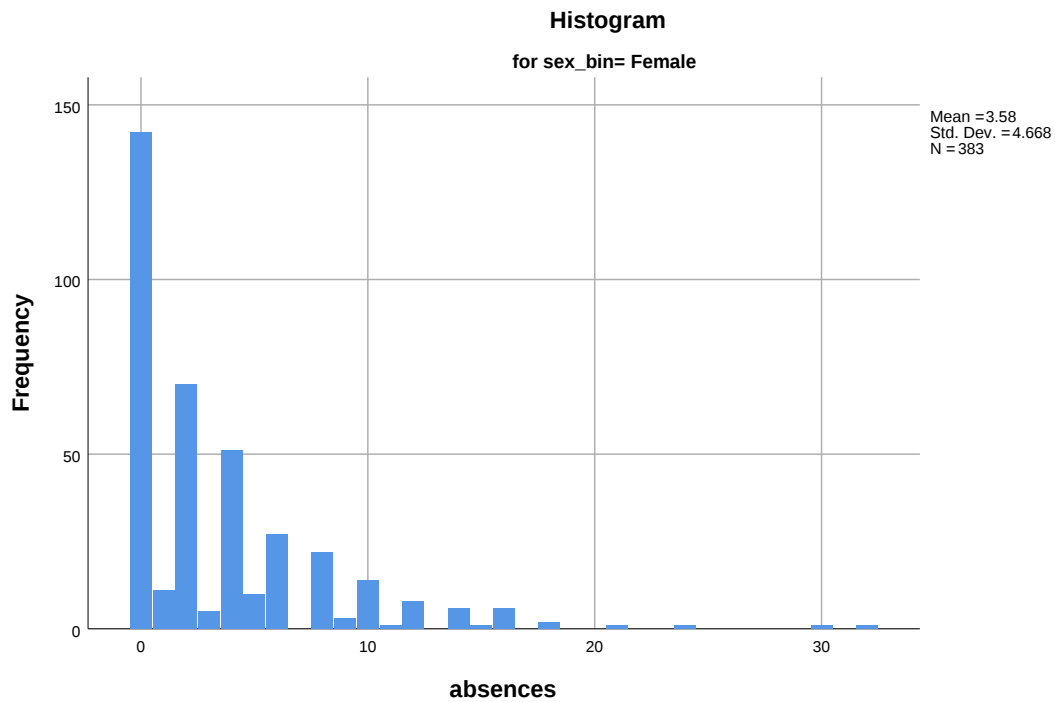
Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	sex_bin	Statistic	df	Sig.	Statistic	df	Sig.
absences	Female	.222	383	.000	.754	383	.000
	Male	.206	266	.000	.794	266	.000

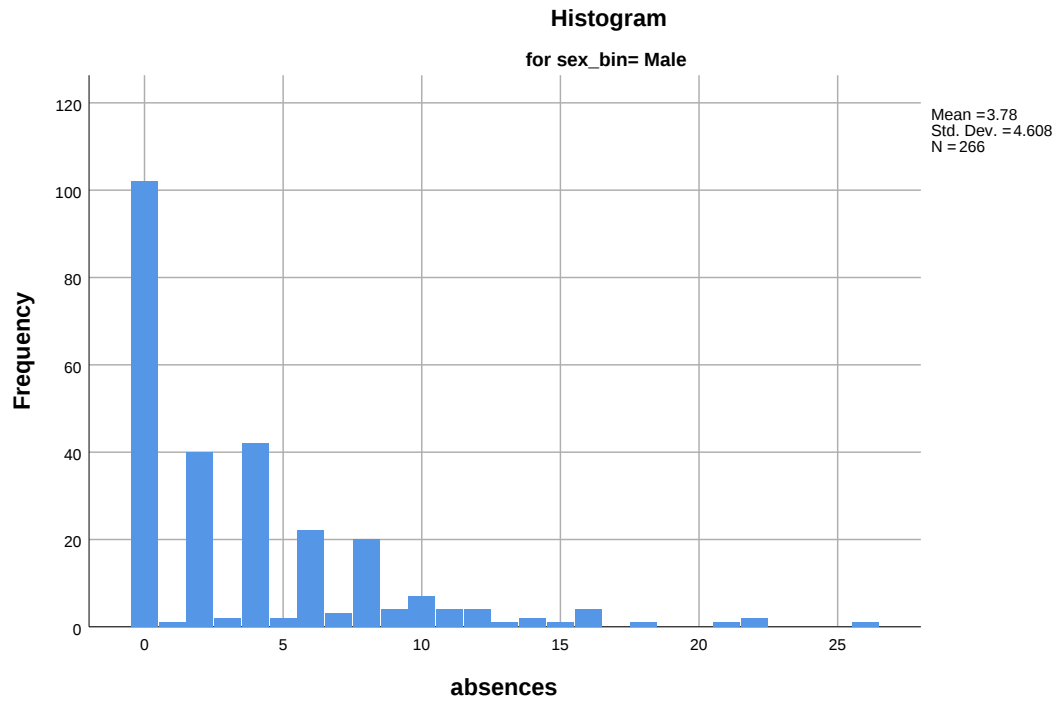
a. Lilliefors Significance Correction

absences

Histograms

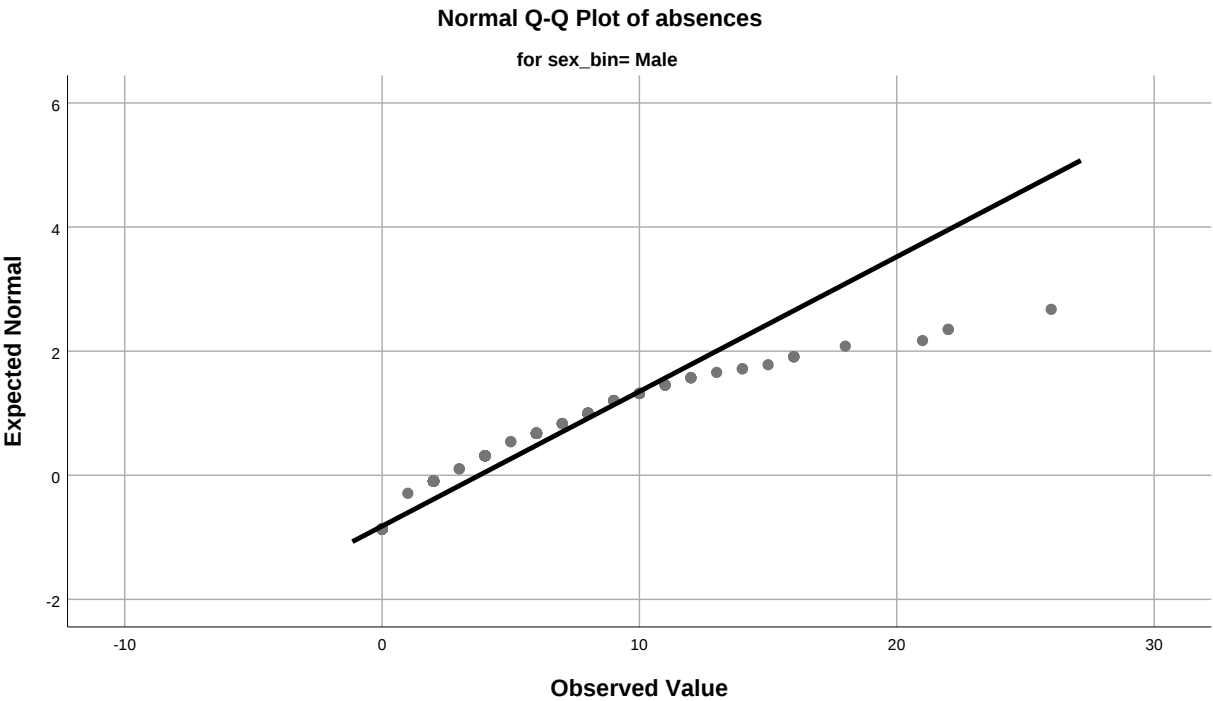
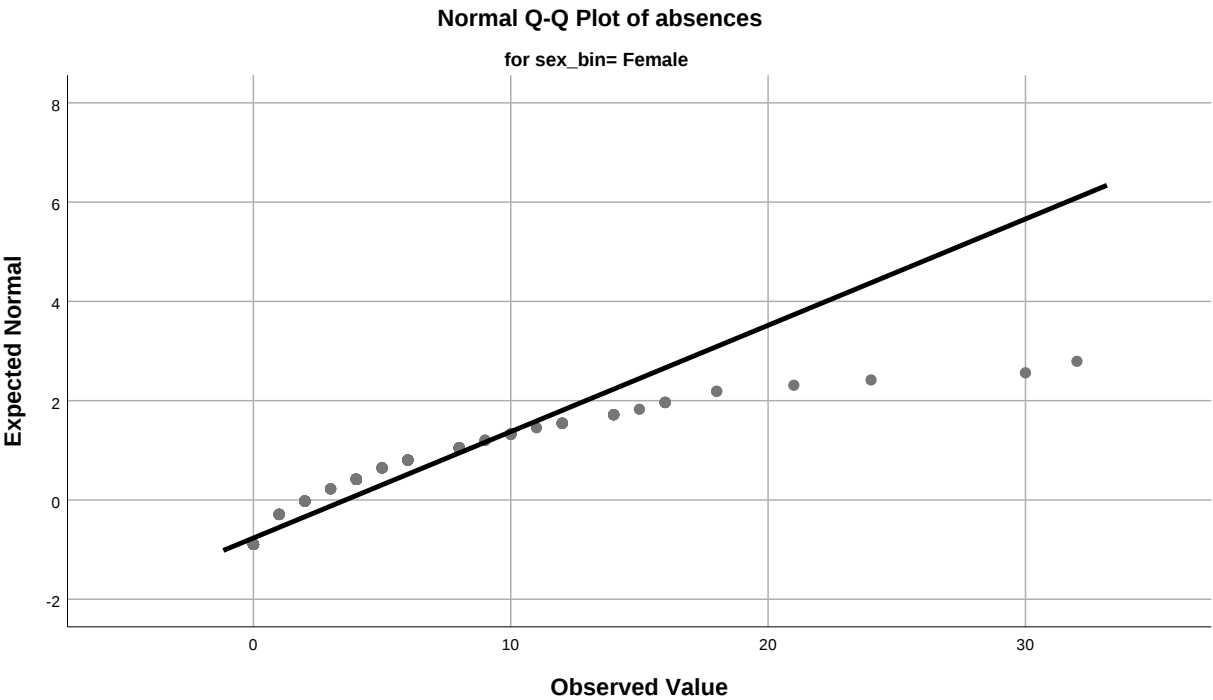


Two-sample Kolmogorov-Smirnov test
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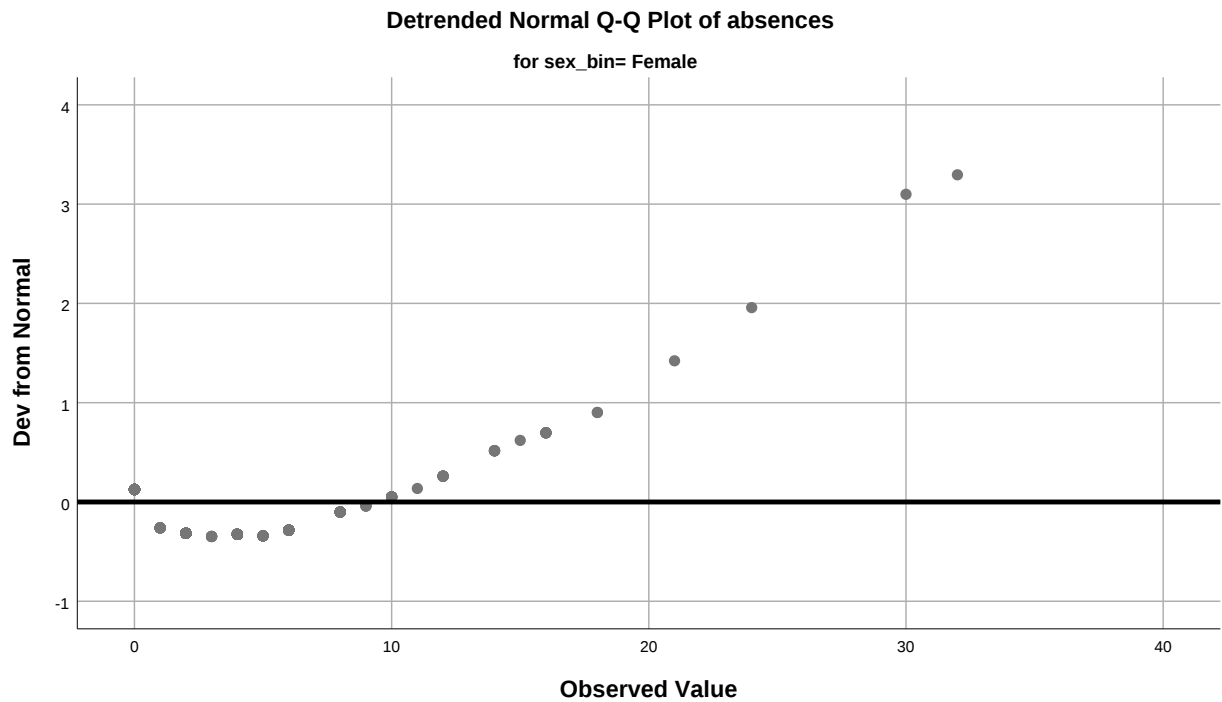
Normal Q-Q Plots

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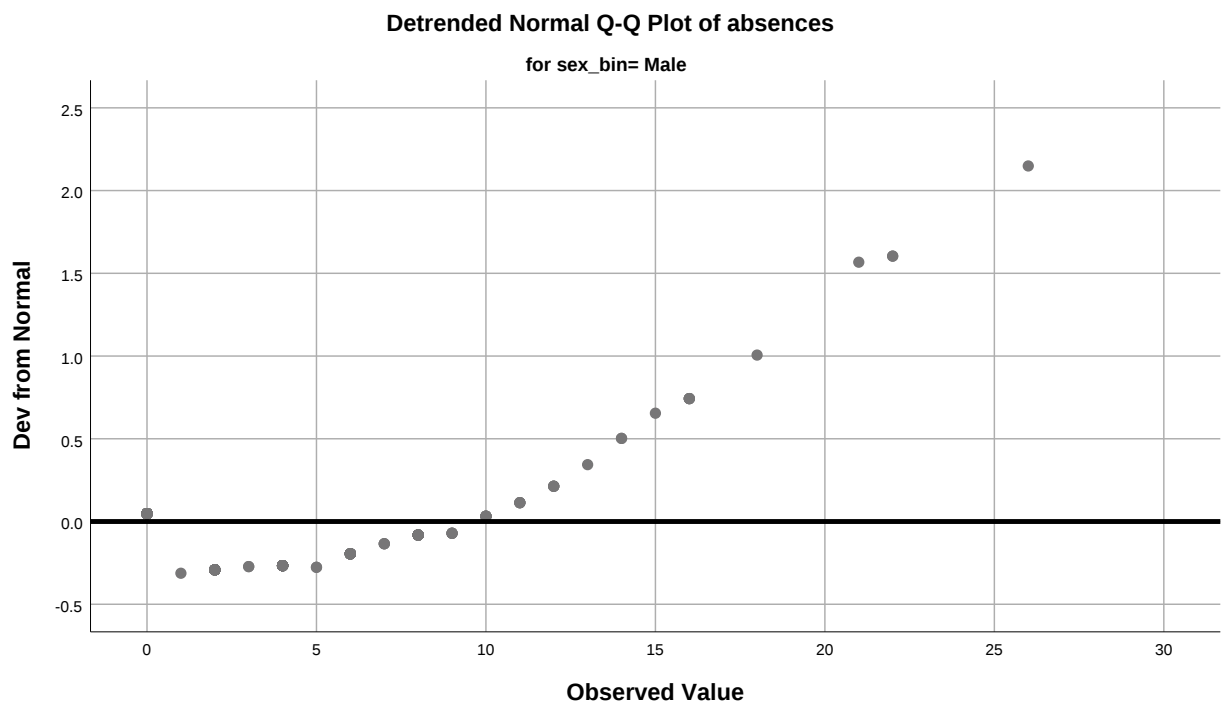


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Detrended Normal Q-Q Plots



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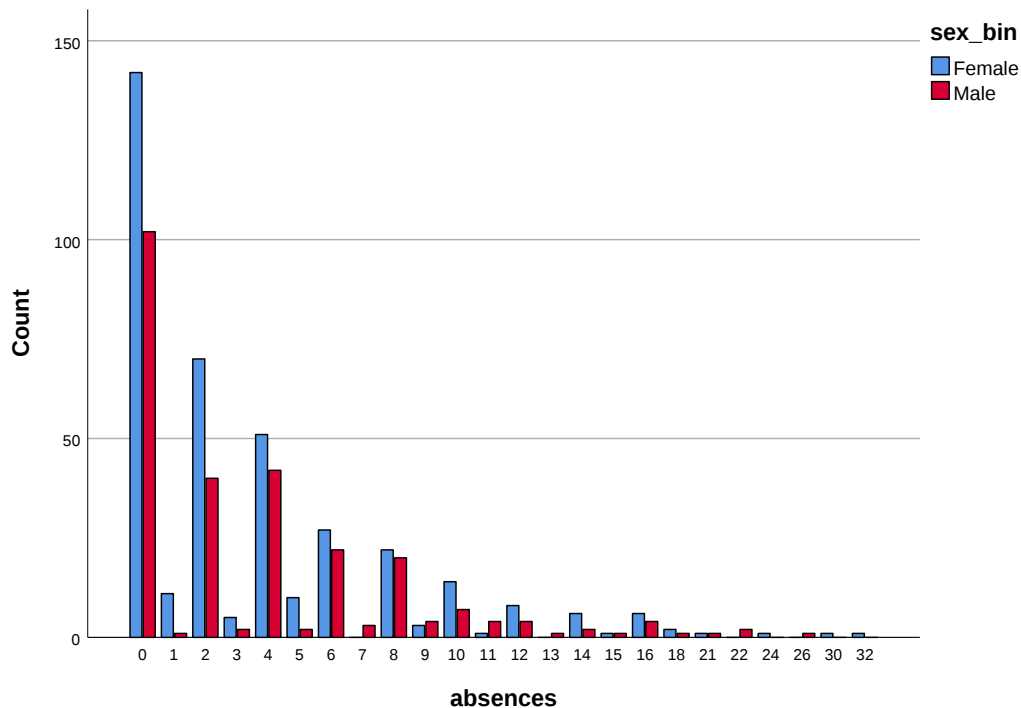
Graph

Two-sample Kolmogorov-Smirnov test
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Notes

Output Created		16-JUL-2026 16:47:25
Comments		
Input	Data	D:\DATA ANALYSIS\J Nonparametric Tests\Kolmogorov Smirnov Two Sample Test\dataset.csv
	Active Dataset	KolmogorovSmirnovTwoS ampleTestData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Syntax		GRAPH /BAR(GROUPED) =COUNT BY absences BY sex_bin.
Resources	Processor Time	00:00:01.33
	Elapsed Time	00:00:01.70

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TWO-SAMPLE KOLMOGOROV-SMIRNOV TEST
Formula: D = sup_x |F_F(x)-F_M(x)|; tied-count significance uses fixed-size la
bel permutations.
Variables: absences, sex
asymptotic_p_scipy = 0.8049827570841168
d_statistic = 0.050187479141718505
p_value = 0.5056494350564944
permutation_null_mean = 0.05217586426902732
permutations = 10000
seed = 20260716
statistic_location = 3.0
statistic_sign = 1
Cross-check status: pass
=====
```