

APPENDIX J: Common Symbols

Symbol	Meaning	First Chapter Discussed
f	frequency	2
n	size of the sample	2
N	size of the population	2
$\%f$	percentage frequency	2
$c.\%f$	cumulative percentage frequency	2
md	median	3
mo	mode	3
s^2	sample variance	3
μ	population mean	3
σ	population standard deviation	3
σ^2	population variance	3
$P(S)$	probability of the sample space	4
$P(A)$	probability of A	4
$P(A^c)$	probability of A complement	4
z	z-score (standardized score)	5
$\mu_{\bar{x}}$	mean of the sampling distribution of means	6
$\sigma_{\bar{x}}$	standard error of the mean	6
H_0	null hypothesis	7
H_A	alternative hypothesis	7
α	alpha or type I error or intercept in regression	7
β	type II error or standardized slope in regression	7
$z_{(a)}$	critical value of z	7
μ_0	sampling distribution mean representing the null hypothesis	8
μ_A	sampling distribution mean representing the alternative hypothesis	8
p	p-value	8
\hat{P}	sample proportion	8
p_0	population proportion	8
$\sigma_{\hat{p}}$	standard error of the proportion	8
$s_{\bar{x}}$	estimated standard error of the mean	8
$s_{\hat{p}}$	estimated standard error of the proportion	8
df	degrees of freedom	8

Symbol	Meaning	First Chapter Discussed
t	t-value	8
$t_{(a)}$	critical value of t	8
$s_{\bar{x}_1 - \bar{x}_2}$	estimated standard error of the difference of the means	10
s_p^2	pooled sample variance	10
CI	confidence interval	10
$\mu_{\bar{D}}$	difference between two population means	10
\bar{D}	mean of the difference between two paired sample scores	10
$s_{\bar{D}}$	estimated standard error of the difference between two paired sample scores	10
s_d	sample standard deviation of the difference between two paired sample scores	10
$\bar{\bar{x}}$	grand mean	11
F	F-ratio	11
k	number of groups in ANOVA	11
SS_B	between group sum of squares	11
SS_W	within group sum of squares	11
SS_T	total sum of squares	11
MS_B	mean sum of squares for between groups	11
MS_W	mean sum of squares for within groups	11
df_B	degrees of freedom for between groups	11
df_W	degrees of freedom for within groups	11
r	Pearson's correlation coefficient r	12
s_r	standard error of r	12
\hat{y}	predicted value of y	12
b	unstandardized beta (slope in regression)	12
s_b	standard error of the unstandardized beta	12
r^2	coefficient of determination	12
χ^2	chi-square	13
ϕ	phi coefficient	13
V	Cramér's V coefficient	13
r_{pb}	point-biserial coefficient	13
ρ	Spearman's rho for the population	13
r_s	Spearman's rho for a sample	13