

Búsqueda estadística de diferencias en las distribuciones de datos procesados

Se evaluó la distancia entre todos los sujetos (utilizando la divergencia de Kullback-Liebler simetrizada). Este cálculo, se realizó sobre los registros procesados de la base de datos Shu Dataset, estos registros fueron preprocesados y luego se aplicó Commu Spatial Patterns para extraer 6 características de cada trial de imágenaría motora. Se agruparon las distancias en intra (MUJER-MUJER y HOMBRE-HOMBRE) e inter-categoría (MUJER-HOMBRE). Para comparar las 3 distribuciones a igual número de muestras, se procedió a sub-muestrear tomando 66 pares, correspondiente al conjunto de menor cardinalidad. Dado que poseemos un número dispar de hombres y mujeres, se excluyó del análisis al hombre cuyo valor medio estuviera más alejado del promedio de los hombres, y en el caso de los pares de sexo mixto se sub-muestreó de forma aleatoria sin repetición.

La extracción de características mediante CSP se realizó sujeto independiente, donde se entrenó CSP con los datos de 8 hombres y 8 mujeres, es decir, un análisis sujeto independiente.

Se realizaron 20 experimentos donde se repitió el proceso: SELECCIÓN DE SUJETOS PARA ENTRENAR CSP, PROYECCIÓN DE LOS DATOS, EVALUACIÓN DE DKLS, ELIMINACIÓN DEL HOMBRE CON MAYOR DESVIO, TESTS DE HIPÓTESIS

Se realizaron test de normalidad y test de comparación de medias, para determinar si las distancias inter e intra categoría provienen de distribuciones cuyos valores medios son iguales. A continuación se muestran las diferentes repeticiones del experimento, con su histograma y los resultados del test de comparación de distribuciones

Iteración 0:

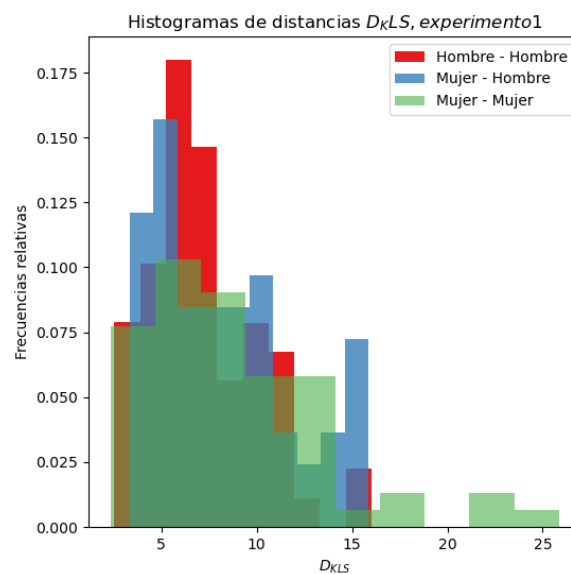
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-008', 'sub-012', 'sub-013', 'sub-015', 'sub-018', 'sub-021', 'sub-022', 'sub-023', 'sub-003', 'sub-005', 'sub-006', 'sub-007', 'sub-009', 'sub-010', 'sub-020', 'sub-024']

El participante excluido fue: sub-025

Los participantes de testeo: ['sub-017', 'sub-025', 'sub-019', 'sub-002', 'sub-016', 'sub-014', 'sub-004', 'sub-011']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9995891507818916 | 6.369020877066247e-224 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.990927108792507 | 3.2527180077963807e-135 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9944813267945678 | 1.828600002287791e-149 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2508.0 | 0.1337172832349197 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 2162.0 | 0.943761652531418 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 1:

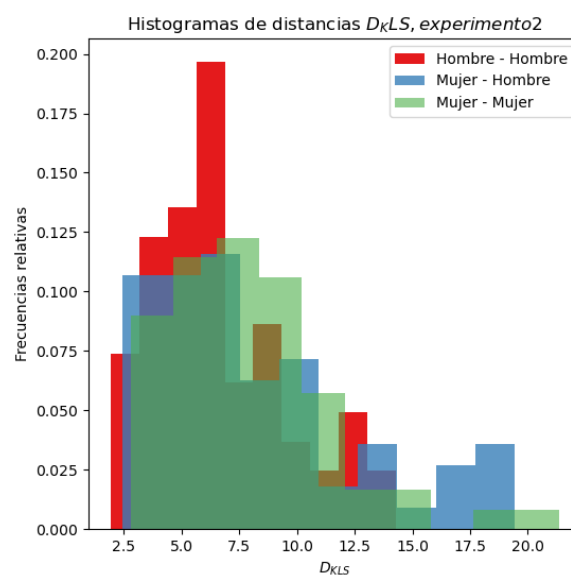
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-002', 'sub-008', 'sub-012', 'sub-018', 'sub-019', 'sub-022', 'sub-023', 'sub-025', 'sub-003', 'sub-005', 'sub-009', 'sub-011', 'sub-014', 'sub-016', 'sub-020', 'sub-024']

El participante excluido fue: sub-002

Los participantes de testeo: ['sub-013', 'sub-017', 'sub-021', 'sub-015', 'sub-010', 'sub-006', 'sub-004', 'sub-007']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9925439667825602 | 7.700998725335347e-141 | False | Reject H0, distribution is not normal(p < 0.05) |
| Female - Female | 0.9974099925628496 | 3.7922480054042645e-171 | False | Reject H0, distribution is not normal(p < 0.05) |
| Male - Male | 0.9799495035222632 | 1.7429648523671942e-112 | False | Reject H0, distribution is not normal(p < 0.05) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2527.0 | 0.1127223554619625 | True | Accept H0, two distribution maybe have equal mean(p > 0.05) |
| Female - Male / Female - Female | 2068.0 | 0.6182369484918422 | True | Accept H0, two distribution maybe have equal mean(p > 0.05) |

Iteración 2:

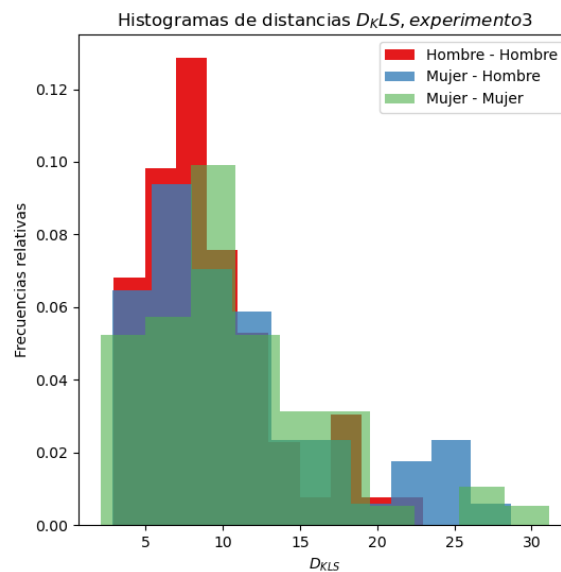
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-002', 'sub-008', 'sub-013', 'sub-015', 'sub-017', 'sub-018', 'sub-021', 'sub-022', 'sub-003', 'sub-005', 'sub-006', 'sub-007', 'sub-009', 'sub-010', 'sub-011', 'sub-024']

El participante excluido fue: sub-002

Los participantes de testeo: ['sub-019', 'sub-023', 'sub-025', 'sub-012', 'sub-014', 'sub-016', 'sub-004', 'sub-020']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|------------------------|-------|---|
| Female - Male | 0.9977919100505912 | 1.014229455927326e-175 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9827279856345872 | 9.239902127671362e-117 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9984702442202482 | 3.062589406260906e-186 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2401.0 | 0.3112368214311607 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 2063.0 | 0.6022926973892223 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 3:

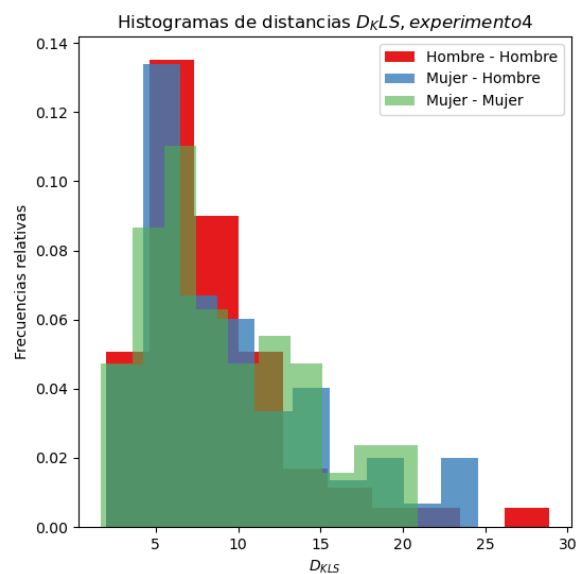
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-008', 'sub-013', 'sub-015', 'sub-017', 'sub-018', 'sub-019', 'sub-023', 'sub-025', 'sub-003', 'sub-004', 'sub-006', 'sub-009', 'sub-011', 'sub-014', 'sub-016', 'sub-024']

El participante excluido fue: sub-012

Los participantes de testeo: ['sub-012', 'sub-002', 'sub-022', 'sub-021', 'sub-005', 'sub-020', 'sub-007', 'sub-010']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|------------------------|-------|---|
| Female - Male | 0.98430738040079 | 1.647894917805124e-119 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9672015200513 | 2.225232014174121e-98 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9830578746826802 | 2.587680913774923e-117 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2312.0 | 0.5434673096058835 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 2170.0 | 0.972770612934235 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 4:

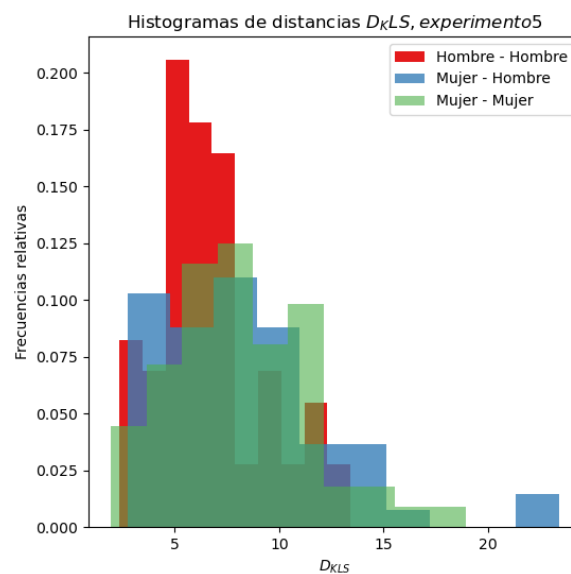
Información general

Los participantes de entrenamiento fueron: ['sub-002', 'sub-008', 'sub-013', 'sub-017', 'sub-019', 'sub-021', 'sub-022', 'sub-023', 'sub-025', 'sub-004', 'sub-006', 'sub-007', 'sub-011', 'sub-014', 'sub-016', 'sub-020', 'sub-024']

El participante excluido fue: sub-015

Los participantes de testeo: ['sub-015', 'sub-012', 'sub-018', 'sub-001', 'sub-010', 'sub-009', 'sub-003', 'sub-005']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9967464060727136 | 1.3092151330933405e-164 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9737663602380772 | 8.824585844946188e-105 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.990802345117185 | 8.011599733878273e-135 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|-------|---|
| Female - Male / Male - Male | 2708.0 | 0.0159598521346243 | False | Reject H0, two distribution have not equal mean($p < 0.05$) |
| Female - Male / Female - Female | 2196.0 | 0.9365195458360304 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 5:

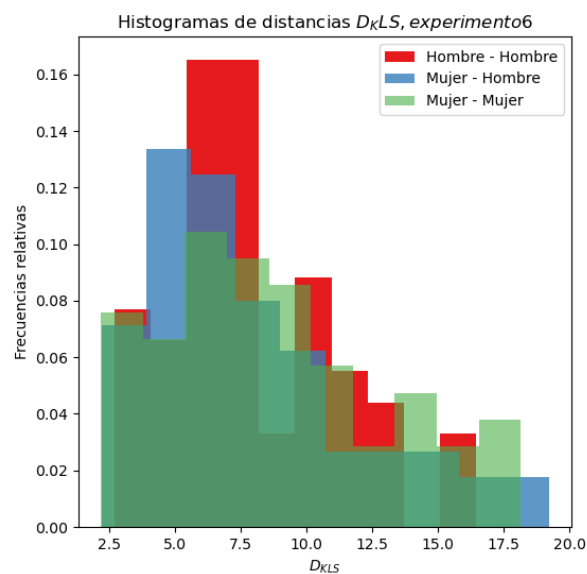
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-008', 'sub-015', 'sub-018', 'sub-019', 'sub-021', 'sub-022', 'sub-023', 'sub-025', 'sub-003', 'sub-004', 'sub-005', 'sub-007', 'sub-009', 'sub-010', 'sub-016', 'sub-024']

El participante excluido fue: sub-012

Los participantes de testeo: ['sub-012', 'sub-013', 'sub-002', 'sub-017', 'sub-014', 'sub-011', 'sub-006', 'sub-020']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|-------------------|------------------------|-------|---|
| Female - Male | 0.986003053815905 | 8.694153858772489e-123 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.985411215129039 | 1.337494254894723e-121 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.996428107530946 | 6.199016855754286e-162 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 1982.0 | 0.3736005445659651 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 1869.0 | 0.1603102553190708 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 6:

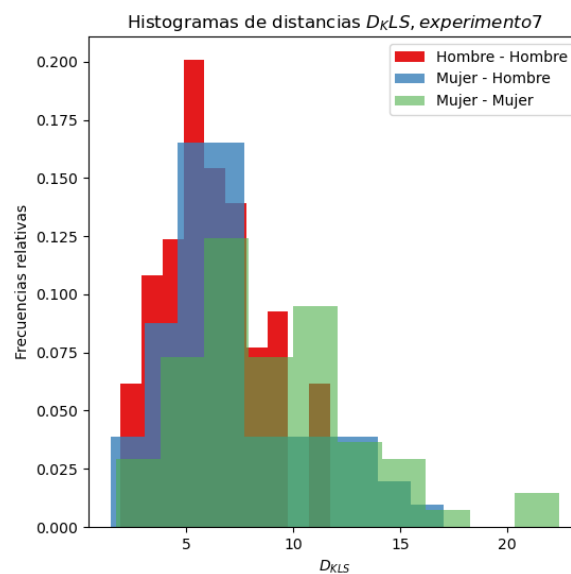
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-002', 'sub-008', 'sub-012', 'sub-015', 'sub-017', 'sub-019', 'sub-021', 'sub-023', 'sub-003', 'sub-004', 'sub-005', 'sub-006', 'sub-009', 'sub-014', 'sub-016', 'sub-024']

El participante excluido fue: sub-025

Los participantes de testeo: ['sub-022', 'sub-025', 'sub-018', 'sub-013', 'sub-020', 'sub-011', 'sub-010', 'sub-007']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9810588806843868 | 4.071948012372097e-114 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9829171508622024 | 4.46694044711028e-117 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.972749650649913 | 1.0853927100288633e-103 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparation | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|-------|---|
| Female - Male / Male - Male | 2478.0 | 0.1728609111225983 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 1539.0 | 0.0036618981900573 | False | Reject H0, two distribution have not equal mean($p < 0.05$) |

Iteración 7:

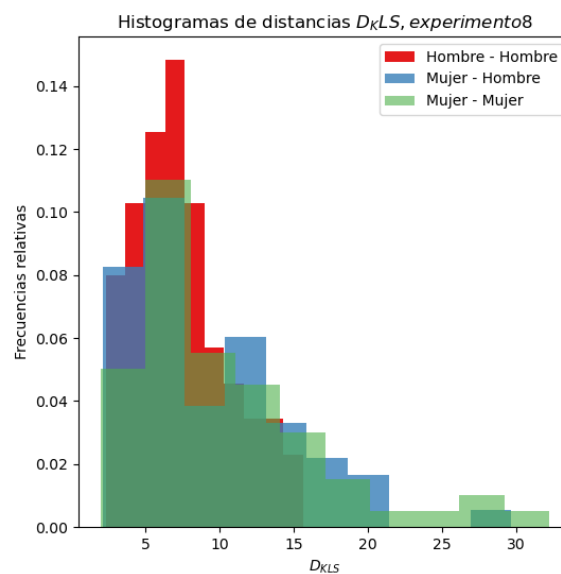
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-008', 'sub-012', 'sub-015', 'sub-017', 'sub-018', 'sub-019', 'sub-021', 'sub-023', 'sub-003', 'sub-004', 'sub-005', 'sub-006', 'sub-010', 'sub-011', 'sub-014', 'sub-024']

El participante excluido fue: sub-025

Los participantes de testeo: ['sub-013', 'sub-002', 'sub-022', 'sub-025', 'sub-016', 'sub-020', 'sub-007', 'sub-009']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.982820353964169 | 6.485865761092673e-117 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9820265478338084 | 1.2785243627965169e-115 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9906800453543128 | 1.9157583387348016e-134 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2512.0 | 0.1290629243632525 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 1951.0 | 0.302618293887524 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 8:

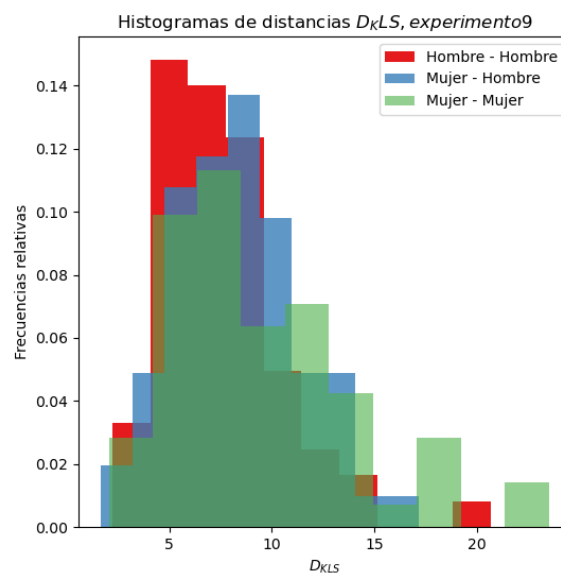
Información general

Los participantes de entrenamiento fueron: ['sub-002', 'sub-008', 'sub-012', 'sub-015', 'sub-018', 'sub-019', 'sub-021', 'sub-022', 'sub-023', 'sub-003', 'sub-004', 'sub-009', 'sub-010', 'sub-011', 'sub-014', 'sub-016', 'sub-024']

El participante excluido fue: sub-013

Los participantes de testeo: ['sub-017', 'sub-001', 'sub-025', 'sub-013', 'sub-005', 'sub-020', 'sub-006', 'sub-007']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9694502961132164 | 2.0487658632642464e-100 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9824048923986032 | 3.139765277603989e-116 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.987389335391336 | 8.907100917686992e-126 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2583.0 | 0.0656305016821268 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 1977.0 | 0.361502948457766 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 9:

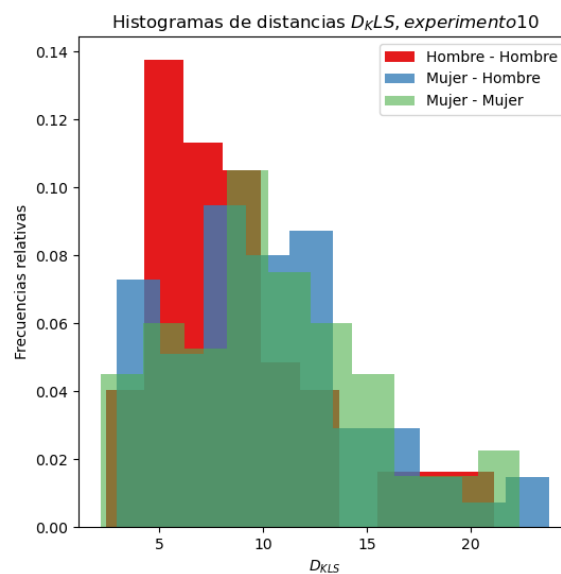
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-002', 'sub-008', 'sub-015', 'sub-017', 'sub-018', 'sub-019', 'sub-022', 'sub-023', 'sub-003', 'sub-004', 'sub-005', 'sub-010', 'sub-011', 'sub-014', 'sub-020', 'sub-024']

El participante excluido fue: sub-025

Los participantes de testeo: ['sub-021', 'sub-013', 'sub-025', 'sub-012', 'sub-006', 'sub-009', 'sub-007', 'sub-016']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9984675812000932 | 3.435129412504049e-186 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9861923397882828 | 3.5396148424706014e-123 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9925725008113124 | 5.979191403814679e-141 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|-------|---|
| Female - Male / Male - Male | 2657.0 | 0.0294266015656131 | False | Reject H0, two distribution have not equal mean($p < 0.05$) |
| Female - Male / Female - Female | 2073.0 | 0.6343630339682178 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 10:

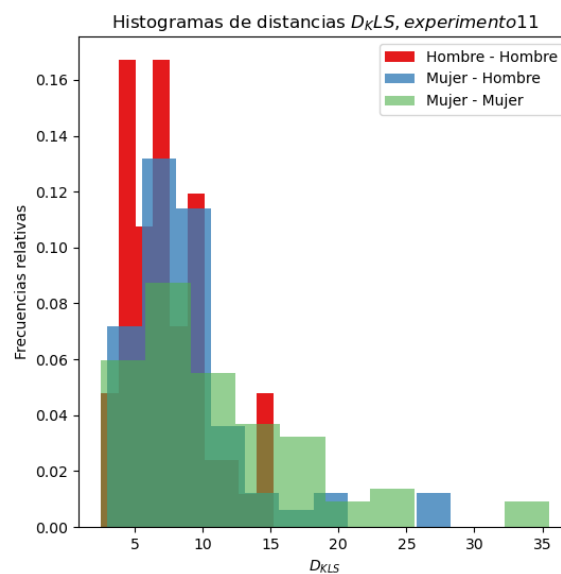
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-008', 'sub-012', 'sub-013', 'sub-015', 'sub-018', 'sub-019', 'sub-021', 'sub-022', 'sub-005', 'sub-006', 'sub-009', 'sub-010', 'sub-011', 'sub-014', 'sub-020', 'sub-024']

El participante excluido fue: sub-025

Los participantes de testeo: ['sub-023', 'sub-025', 'sub-017', 'sub-002', 'sub-003', 'sub-004', 'sub-016', 'sub-007']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9986398217801382 | 1.3132695472677589e-189 | False | Reject H0, distribution is not normal(p < 0.05) |
| Female - Female | 0.993906625363638 | 1.26371781495208e-146 | False | Reject H0, distribution is not normal(p < 0.05) |
| Male - Male | 0.9942918951432456 | 1.6962825535585823e-148 | False | Reject H0, distribution is not normal(p < 0.05) |

Test de Mann-Whitney U

| Comparation | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|-------|---|
| Female - Male / Male - Male | 2612.0 | 0.0485044221745731 | False | Reject H0, two distribution have not equal mean(p < 0.05) |
| Female - Male / Female - Female | 1778.0 | 0.0690361304180853 | True | Accept H0, two distribution maybe have equal mean(p > 0.05) |

Iteración 11:

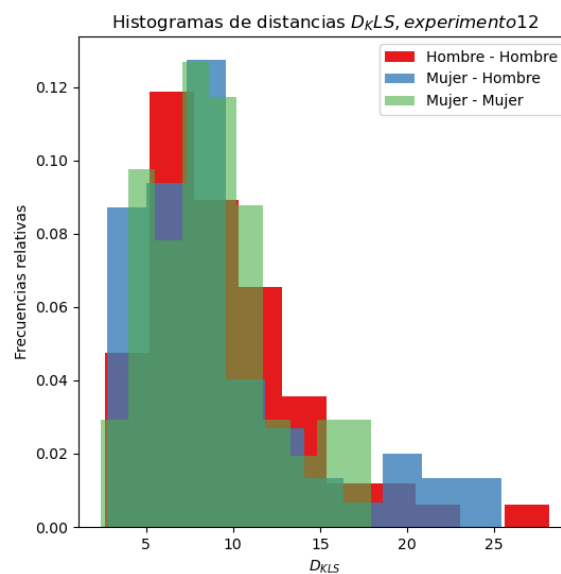
Información general

Los participantes de entrenamiento fueron: ['sub-002', 'sub-008', 'sub-013', 'sub-017', 'sub-018', 'sub-019', 'sub-021', 'sub-023', 'sub-025', 'sub-004', 'sub-005', 'sub-006', 'sub-007', 'sub-009', 'sub-011', 'sub-016', 'sub-024']

El participante excluido fue: sub-012

Los participantes de testeo: ['sub-015', 'sub-012', 'sub-022', 'sub-001', 'sub-020', 'sub-010', 'sub-003', 'sub-014']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9973930512020158 | 5.831430331877262e-171 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9921531894377824 | 2.242740797096913e-139 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.99582912009179 | 1.7220955064073732e-157 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 1990.0 | 0.3934707453500994 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 2115.0 | 0.7760680825658832 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 12:

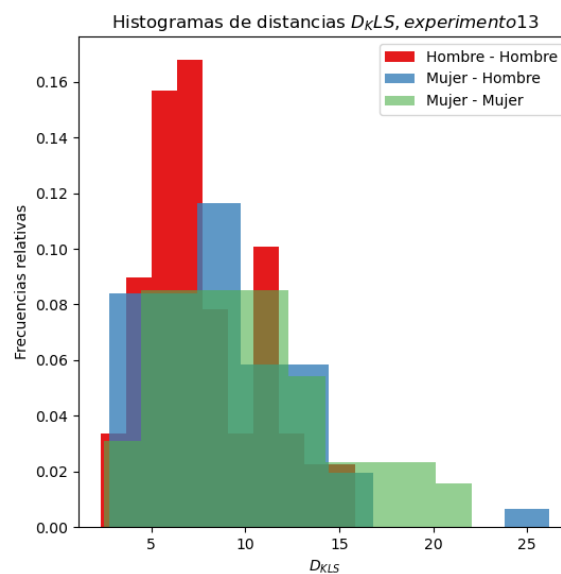
Información general

Los participantes de entrenamiento fueron: ['sub-002', 'sub-008', 'sub-015', 'sub-017', 'sub-019', 'sub-021', 'sub-022', 'sub-023', 'sub-025', 'sub-003', 'sub-006', 'sub-007', 'sub-009', 'sub-010', 'sub-011', 'sub-014', 'sub-024']

El participante excluido fue: sub-002

Los participantes de testeo: ['sub-001', 'sub-012', 'sub-013', 'sub-018', 'sub-005', 'sub-004', 'sub-016', 'sub-020']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9970377144228576 | 2.681680192921063e-167 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9938291493647696 | 2.9093922126559117e-146 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9898470424241468 | 5.446778491891023e-132 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2450.0 | 0.2165937401852163 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 1794.0 | 0.0809213732418615 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 13:

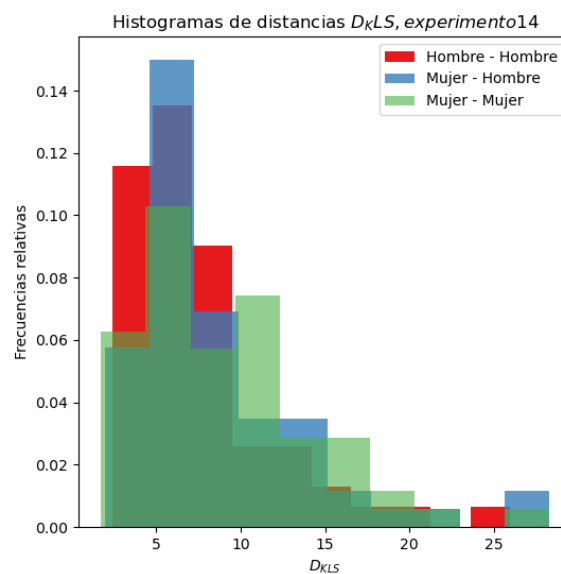
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-002', 'sub-008', 'sub-012', 'sub-013', 'sub-017', 'sub-021', 'sub-022', 'sub-023', 'sub-004', 'sub-005', 'sub-006', 'sub-007', 'sub-009', 'sub-011', 'sub-016', 'sub-020']

El participante excluido fue: sub-025

Los participantes de testeo: ['sub-015', 'sub-019', 'sub-025', 'sub-018', 'sub-003', 'sub-014', 'sub-010', 'sub-024']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.976090111931175 | 1.9370812406898665e-107 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.981540397037248 | 7.442270963235788e-115 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9920817427844554 | 4.079283974281582e-139 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2471.0 | 0.1831197544718832 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 1977.0 | 0.361502948457766 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 14:

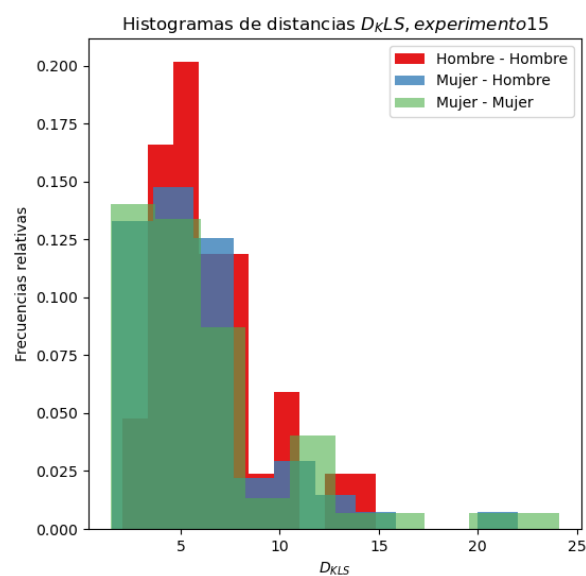
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-008', 'sub-012', 'sub-015', 'sub-019', 'sub-021', 'sub-022', 'sub-023', 'sub-025', 'sub-003', 'sub-004', 'sub-005', 'sub-007', 'sub-009', 'sub-011', 'sub-016', 'sub-020']

El participante excluido fue: sub-012

Los participantes de testeo: ['sub-013', 'sub-002', 'sub-017', 'sub-018', 'sub-024', 'sub-006', 'sub-010', 'sub-014']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|------------------------|-------|---|
| Female - Male | 0.9563283710217516 | 3.5825300881663114e-90 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9471236804947122 | 1.0871026249312444e-84 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9821425558105936 | 8.338806444828334e-116 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 1794.0 | 0.0809213732418615 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 2187.0 | 0.969141732177919 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 15:

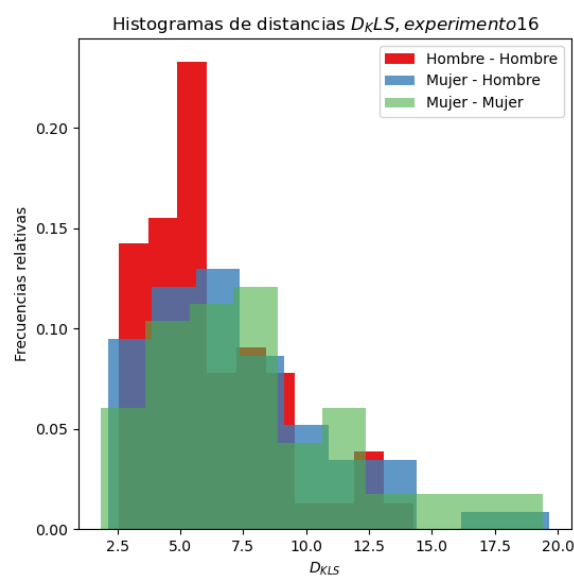
Información general

Los participantes de entrenamiento fueron: ['sub-002', 'sub-008', 'sub-012', 'sub-013', 'sub-015', 'sub-017', 'sub-021', 'sub-022', 'sub-025', 'sub-005', 'sub-006', 'sub-009', 'sub-010', 'sub-011', 'sub-014', 'sub-016', 'sub-024']

El participante excluido fue: sub-025

Los participantes de testeo: ['sub-018', 'sub-001', 'sub-019', 'sub-023', 'sub-007', 'sub-004', 'sub-020', 'sub-003']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|------------------------|-------|---|
| Female - Male | 0.9828985118107324 | 4.800292617741539e-117 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.968920029651782 | 6.378951760348241e-100 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9945535474679664 | 7.665415660082596e-150 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2547.0 | 0.0935233816279073 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 1941.0 | 0.2817724203234407 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 16:

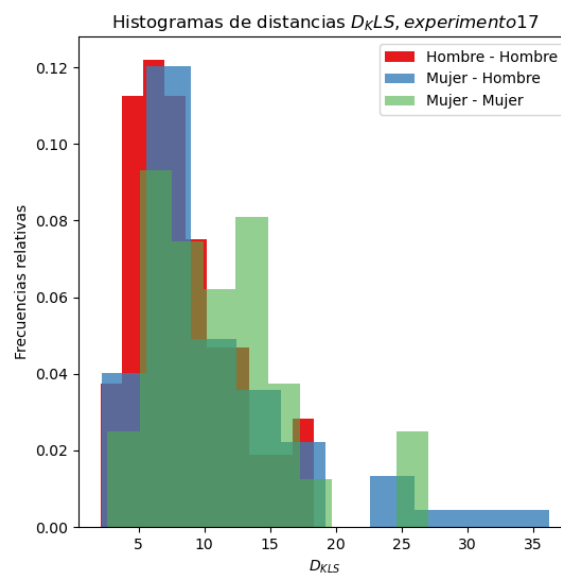
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-002', 'sub-008', 'sub-012', 'sub-017', 'sub-019', 'sub-021', 'sub-022', 'sub-025', 'sub-005', 'sub-009', 'sub-010', 'sub-011', 'sub-014', 'sub-016', 'sub-020', 'sub-024']

El participante excluido fue: sub-002

Los participantes de testeo: ['sub-015', 'sub-013', 'sub-018', 'sub-023', 'sub-003', 'sub-006', 'sub-007', 'sub-004']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|------------------------|-------|---|
| Female - Male | 0.9869695593397262 | 7.7326932463733e-125 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9958972376379676 | 5.808579471469337e-158 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9840774112871348 | 4.304598931434954e-119 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2524.0 | 0.1158528771986818 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 1889.0 | 0.1891809530662701 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 17:

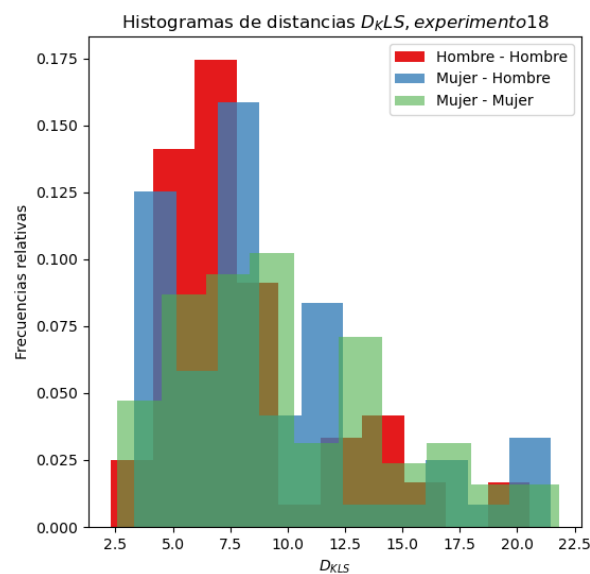
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-012', 'sub-013', 'sub-017', 'sub-018', 'sub-019', 'sub-022', 'sub-023', 'sub-025', 'sub-003', 'sub-006', 'sub-010', 'sub-011', 'sub-014', 'sub-016', 'sub-020', 'sub-024']

El participante excluido fue: sub-002

Los participantes de testeo: ['sub-002', 'sub-008', 'sub-021', 'sub-015', 'sub-005', 'sub-007', 'sub-009', 'sub-004']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.999566386825022 | 2.2376542197191648e-222 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9951605211185428 | 3.145846525322079e-153 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.9894095931480088 | 8.815857224236377e-131 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2407.0 | 0.2983691252883895 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 1935.0 | 0.2697436228142968 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 18:

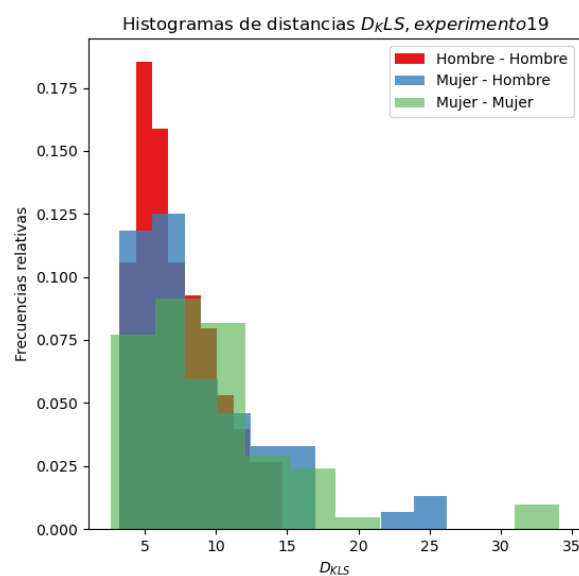
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-002', 'sub-008', 'sub-012', 'sub-013', 'sub-015', 'sub-019', 'sub-022', 'sub-025', 'sub-004', 'sub-005', 'sub-006', 'sub-007', 'sub-010', 'sub-011', 'sub-020', 'sub-024']

El participante excluido fue: sub-002

Los participantes de testeo: ['sub-023', 'sub-018', 'sub-017', 'sub-021', 'sub-014', 'sub-009', 'sub-003', 'sub-016']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9993153234236948 | 2.7737737733349173e-209 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9954969622981384 | 2.7064404889777454e-155 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.999359560298162 | 3.3774915825915923e-211 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2536.0 | 0.1037296504038406 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 1974.0 | 0.354363656241729 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |

Iteración 19:

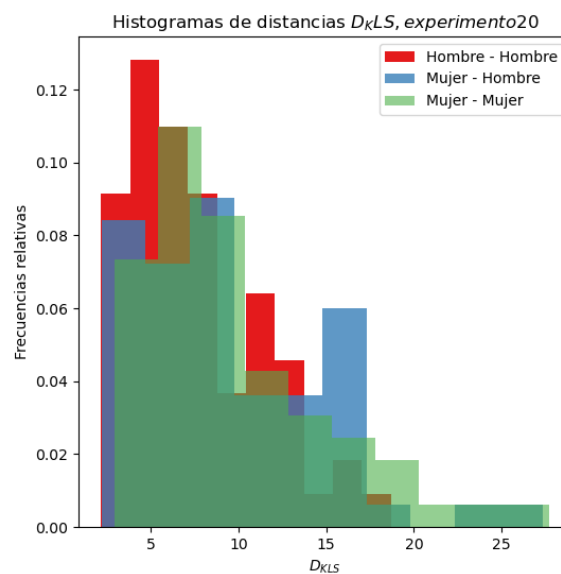
Información general

Los participantes de entrenamiento fueron: ['sub-001', 'sub-002', 'sub-008', 'sub-013', 'sub-017', 'sub-018', 'sub-019', 'sub-022', 'sub-023', 'sub-003', 'sub-005', 'sub-006', 'sub-007', 'sub-009', 'sub-014', 'sub-016', 'sub-024']

El participante excluido fue: sub-025

Los participantes de testeo: ['sub-025', 'sub-015', 'sub-021', 'sub-012', 'sub-020', 'sub-004', 'sub-011', 'sub-010']

Histograma



Test de Normalidad

| Distances | statistics | p-value | H0 | Description |
|-----------------|--------------------|-------------------------|-------|---|
| Female - Male | 0.9852476205813478 | 2.7920735158797716e-121 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Female - Female | 0.9981122863198024 | 3.2569727396740678e-180 | False | Reject H0, distribution is not normal($p < 0.05$) |
| Male - Male | 0.98410875867999 | 3.779603994027988e-119 | False | Reject H0, distribution is not normal($p < 0.05$) |

Test de Mann-Whitney U

| Comparison | statics | p-value | H0 | Description |
|---------------------------------|---------|--------------------|------|---|
| Female - Male / Male - Male | 2594.0 | 0.0586241313364471 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |
| Female - Male / Female - Female | 2084.0 | 0.6704487183754633 | True | Accept H0, two distribution maybe have equal mean($p > 0.05$) |