Correction to Yunjung Park, Inha Song, Soyoun Lee, Kwang Hyun Nam, Rosy Oh, Jaeyoun Ahn (2023)

In the article "Estimating home fire severity with statistical distributions" by Yunjung Park, Inha Song, Soyoun Lee, Kwang Hyun Nam, Rosy Oh, Jaeyoun Ahn (*The Korean Journal of Applied Statistics*, 2023, Vol. 36, No. 6, p.591–618, `https://doi.org/10.5351/KJAS.2023.36.6.591`), there were errors in Tables 14, 15 and Tables A.9–A.11.

Tables 14, 15 in Vol. 36, No.6 on p.607–608 and Tables A.9–A.11 on p.614–616 were:

Table 14: Relative risk of buildings compared to average

Variable	Parameter	Relative risk	*p*-value
바닥면적	우량체	0.7558	0.000
	표준체	1.0110	0.490
	표준미달체	1.2279	0.000
소방서거리	우량체	0.8674	0.000
	표준체	1.0599	0.087
	표준미달체	1.1131	0.000
소화기구	사용	0.9303	0.000
	미사용	1.3605	0.000
단독경보형감지기	작동	0.8062	0.000
	미작동	1.1726	0.000

Table 15: Relative riskof equipment compared to average

Variable	Parameter	Relative risk	*p*-value
바닥면적	우량체	0.7964	0.001
	표준체	0.9482	0.388
	표준미달체	1.1916	0.000
소방서거리	우량체	0.8903	0.003
	표준체	1.0231	0.533
	표준미달체	1.2165	0.000
소화기구	사용	0.9373	0.000
	미사용	1.3551	0.000
단독경보형감지기	작동	0.8392	0.000
	미작동	1.2108	0.000

Table A.9: Relative risk by grade for building fire damage costs

Grade	Relative risk	Number of fires	Weight
1	0.602	1,242	0.174
2	0.794	1,549	0.217
3	0.944	1,659	0.232
4	1.194	1,618	0.226
5	1.551	1,077	0.151
Total		7,145	1.000

Table A.10: Relative risk by grade for fire damage costs of equipment

Grade	Relative risk	Number of fires	Weight
1	0.626	1,907	0.200
2	0.813	2,266	0.238
3	0.955	1,649	0.173
4	1.152	1,835	0.193
5	1.499	1,867	0.196
Total		9,524	1.000

Table A.11: Calculation of relative risk by grade for building fire damage costs

Floor* area	Distance*	Fire* extinguisher	Alarm*	Number of fires	Weight	Relative risk	Grade	Weight within grade	Relative risk by grade
T1	T1	1	1	342	0.0479	0.4917	1	0.2754	0.1354
T1	T2	1	1	144	0.0202	0.6008	1	0.1159	0.0697
T1	T3	1	1	178	0.0249	0.6310	1	0.1433	0.0904
T2	T1	1	1	578	0.0809	0.6577	1	0.4654	0.3061
T1	T1	0	1	52	0.0073	0.7191	2	0.0336	0.0241
T1	T1	1	0	222	0.0311	0.7152	2	0.1433	0.1025
T3	T1	1	1	707	0.0990	0.7988	2	0.4564	0.3646
T2	T2	1	1	284	0.0397	0.8037	2	0.1833	0.1473
T1	T2	0	1	30	0.0042	0.8786	2	0.0194	0.0170
T2	T3	1	1	254	0.0355	0.8440	2	0.1640	0.1384
T1	T2	1	0	231	0.0323	0.8739	3	0.1392	0.1217
T1	T3	0	1	50	0.0070	0.9227	3	0.0301	0.0278
T1	T3	1	0	517	0.0724	0.9177	3	0.3116	0.2860
T2	T1	0	1	73	0.0102	0.9619	3	0.0440	0.0423
T2	T1	1	0	324	0.0453	0.9566	3	0.1953	0.1868
T1	T1	0	0	79	0.0111	1.0459	3	0.0476	0.0498
T3	T2	1	1	297	0.0416	0.9761	3	0.1790	0.1747
T3	T3	1	1	88	0.0123	1.0251	3	0.0530	0.0544
T3	T1	0	1	62	0.0087	1.1682	4	0.0383	0.0448
T2	T2	0	1	36	0.0050	1.1753	4	0.0222	0.0262
T3	T1	1	0	494	0.0691	1.1619	4	0.3053	0.3547
T2	T2	1	0	319	0.0446	1.1689	4	0.1972	0.2305
T2	T3	0	1	48	0.0067	1.2343	4	0.0297	0.0366
T1	T2	0	0	44	0.0062	1.2780	4	0.0272	0.0348
T2	T3	1	0	615	0.0861	1.2276	4	0.3801	0.4666
T1	T3	0	0	177	0.0248	1.3421	5	0.1643	0.2206
T2	T1	0	0	78	0.0109	1.3990	5	0.0724	0.1013
T3	T2	0	1	24	0.0034	1.4275	5	0.0223	0.0318
T3	T2	1	0	252	0.0353	1.4197	5	0.2340	0.3322
T3	T3	0	1	22	0.0031	1.4991	5	0.0204	0.0306
T3	T3	1	0	170	0.0238	1.4910	5	0.1578	0.2353
T3	T1	0	0	62	0.0087	1.6991	5	0.0576	0.0978
T2	T2	0	0	65	0.0091	1.7095	5	0.0604	0.1032
T2	T3	0	0	163	0.0228	1.7953	5	0.1513	0.2717
T3	T2	0	0	32	0.0045	2.0762	5	0.0297	0.0617
T3	T3	0	0	32	0.0045	2.1804	5	0.0297	0.0648
Total				7,145					

*Fire area, Distance) T1: 우량체, T2: 표준체, T3: 표준미달체

*Fire extinguisher) 1: 사용, 0: 미사용

*Alarm) 1: 작동, 0: 미작동

The correction is:

주요 수정 사항은 아래와 같습니다.

1. 소화기 및 경보기 정보를 하나의 변수로 일원화했습니다.
2. 상대 위험도 적용 시 면적 변수를 제외했습니다.
3. 1, 2에 따라 변경된 상대위험도, 화재 건수, 비중 수치를 기술했습니다.

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p.607–608

Table 14. Relative risk of buildings compared to average

Variable		Relative Risk	p-value
소방서와의 거리	우량체	0.8530	0.000
	표준체	1.0516	0.084
	표준미달체	1.1091	0.000
소화기 및 경보기	소화기 유/경보기 유	0.7391	0.000
	소화기 유/경보기 무	1.1087	0.000
	소화기 무/경보기 유	1.1832	0.055
	소화기 무/경보기 무	1.5406	0.000

Table 15: Relative risk of equipment compared to average

Variable		Relative Risk	p-value
소방서와의 거리	우량체	0.8743	0.002
	표준체	1.0098	0.546
	표준미달체	1.2194	0.000
소화기 및 경보기	소화기 유/경보기 유	0.7727	0.000
	소화기 유/경보기 무	1.1656	0.000
	소화기 무/경보기 유	1.2448	0.048
	소화기 무/경보기 무	1.5074	0.000

Appendix

Table A.9: Relative risk by grade for building fire damage costs

Grade	Relative Risk	Number of fires	Proportion
1	0.630	1,627	0.228
2	0.795	1,245	0.174
3	0.955	1,227	0.172
4	1.205	2,104	0.294
5	1.509	942	0.132
합계		7,145	1.000

Table A.10: Relative risk by grade for fire damage costs of equipment

Grade	Relative Risk	Number of fires	Proportion
1	0.676	3,114	0.327
2	0.834	1,576	0.165
3	1.019	1,350	0.142
4	1.191	1,683	0.177
5	1.513	1,801	0.189
합계		9,524	1.000

Table A.11: Calculation of relative risk by grade for building fire damage costs

Distance*	Firefighting devices**	Number of fires	Proportion	Relative Risk	Grade	Proportion within grade	Relative Risk by grade
T1	TT	1,627	0.2277	0.6305	1	1.0000	0.6305
T2	TT	725	0.1015	0.7772	2	0.5823	0.4526
T3	TT	520	0.0728	0.8197	2	0.4177	0.3424
T1	TF	1,040	0.1456	0.9457	3	0.8476	0.8016
T1	FT	187	0.0262	1.0093	3	0.1524	0.1538
T2	TF	802	0.1122	1.1659	4	0.3812	0.4444
T3	TF	1,302	0.1822	1.2297	4	0.6188	0.7609
T2	FT	90	0.0126	1.2443	5	0.0955	0.1189
T3	FT	120	0.0168	1.3123	5	0.1274	0.1672
T1	FF	219	0.0307	1.3141	5	0.2325	0.3055
T2	FF	141	0.0197	1.6201	5	0.1497	0.2425
T3	FF	372	0.0521	1.7087	5	0.3949	0.6748
합계		7,145					

*소방서와의 거리/ T1: 우량체, T2: 표준체, T3: 표준미달체

** TT: 소화기 유/경보기 유, TF: 소화기 유/경보기 무, FT: 소화기 무/경보기 유, FF: 소화기 무/경보기 무