Results:

2*8 Within subject (Crime)

➤ Descriptive Statistics: (Crime)

Cause of offence	Number of offences		Mean Risk Rating	
	Day	Year	Day	Year
Shoplifting	933	340719	14.6383	13.8085
Burglary	1091	398406	14.8511	14.9787
Bicycle	232	84794	15.1915	12.4681
Vehicle	1006	367447	15.0851	13.3404
Robbery	113	41419	15.6383	14.5532
Theft	4814	1756937	15.7021	14.7660
Interfering with a motorcycle	126	45832	13.9787	12.4681
Robbery of personal property	126	46033	15.3617	13.6170
Mean			15.0559	13.7500
(SD)			0.56647	0.97560

➤ Test for Main and Interaction effects:

1. At first from Mauchly's Test of Sphericity table we observe
   - As time has just two levels so no need for checking sphericity assumption
   - For Risk p-value>0.05 so it is insignificant and we assume that sphericity condition is met. For F-Ratio of Risk in within subject effect table, we have to observe Sphericity assumed row.
   - For Time*Risk p-value<0.05 so it is significant. For F-Ratio of Time*Risk in within subject effect we have to observe Greenhouse-Geisser row.

Mauchly's Test of Sphericity[a]							
Measure: Rate							
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Time	1.000	0.000	0		1.000	1.000	1.000
Risk	.419	37.807	27	.082	.817	.946	.143
Time * Risk	.207	68.523	27	.000	.691	.782	.143

2. From Test of within subjects table we observe
   There is no significant main or interaction effect.
   - As for time F(1,46)=2.501 & p-value 0.121>0.05, (Highlighted by yellow color)
   - for Risk F(7,322)=1.667 & p-value 0.133>0.05 , (Highlighted by Green color)
   - for time*risk interaction effect F(5,222)=1.389 & p-value 0.231>0.05. (Highlighted by yellow color)

Tests of Within-Subjects Effects (Crime)						
Measure: Rate						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Sphericity Assumed	320.586	1	320.586	2.501	.121
	Greenhouse-Geisser	320.586	1.000	320.586	2.501	.121
	Huynh-Feldt	320.586	1.000	320.586	2.501	.121
	Lower-bound	320.586	1.000	320.586	2.501	.121
Error(Time)	Sphericity Assumed	5897.101	46	128.198		
	Greenhouse-Geisser	5897.101	46.000	128.198		
	Huynh-Feldt	5897.101	46.000	128.198		
	Lower-bound	5897.101	46.000	128.198		
Risk	Sphericity Assumed	303.477	7	43.354	1.667	.116
	Greenhouse-Geisser	303.477	5.716	53.090	1.667	.133
	Huynh-Feldt	303.477	6.620	45.844	1.667	.121
	Lower-bound	303.477	1.000	303.477	1.667	.203
Error(Risk)	Sphericity Assumed	8374.585	322	26.008		
	Greenhouse-Geisser	8374.585	262.951	31.848		
	Huynh-Feldt	8374.585	304.508	27.502		
	Lower-bound	8374.585	46.000	182.056		
Time * Risk	Sphericity Assumed	115.233	7	16.462	1.389	.209
	Greenhouse-Geisser	115.233	4.834	23.838	1.389	.231
	Huynh-Feldt	115.233	5.471	21.064	1.389	.224
	Lower-bound	115.233	1.000	115.233	1.389	.245
Error(Time* Risk)	Sphericity Assumed	3816.580	322	11.853		
	Greenhouse-Geisser	3816.580	222.367	17.163		
	Huynh-Feldt	3816.580	251.646	15.166		
	Lower-bound	3816.580	46.000	82.969		

2*8 Within subject (Health)

➢ **Descriptive Statistics: (Health)**

	Number of Deaths		Mean Risk Rating	
Cause of death	Day	Year	Day	Year
Strokes	115	42000	15.6809	13.9574
Heart Disease	225	82000	17.3404	15.4255
Pneumonia	86	31600	14.5532	12.2128
Kidney Disease	116	42500	15.9149	13.2766
HIV	1	500	12.1489	12.4894
Cancer	431	157300	17.1277	16.7660
Diabetes	8	72500	15.2128	14.3617
Respiratory Diseases	116	25000	16.2979	14.9574
Mean			15.5346	14.1809
(SD)			1.65084	1.53390

➢ **Test for Main and Interaction effects**

1. At first from Mauchly's Test of Sphericity table we observe
   - As time has just two levels so no need for checking sphericity assumption
   - For Risk p-value<0.05 so it is significant. For F-ratio of Risk in within subject effect table, we have to observe Greenhouse-Geisser row.
   - For Time*Risk p-value<0.05 so it is significant. For F-ratio of Time*Risk in within subject effect we have to observe Greenhouse-Geisser row.

Mauchly's Test of Sphericity[a]							
Measure: Rate							
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Time	1.000	0.000	0		1.000	1.000	1.000
Risk	.183	73.698	27	.000	.690	.780	.143
Time * Risk	.170	77.043	27	.000	.641	.719	.143

2. From Test of within subjects table we observe

   There is no significant main effect of Time and Interaction effect of Time*Risk .

   - As for time F(1,46)=2.089 & p-value 0.155>0.05, (Highlighted by yellow color)
   - for Time*Risk interaction effect F(4,206)=2.223 & p-value 0.06>0.05. (Highlighted by yellow color)
   - But for Risk F(5,222)=8.151 P-value for Risk is 0.000<.05. So there is significant main effect of Risk. (Highlighted by Blue color)

Tests of Within-Subjects Effects(Health)						
Measure: Rate						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Sphericity Assumed	344.523	1	344.523	2.089	.155
	Greenhouse-Geisser	344.523	1.000	344.523	2.089	.155
	Huynh-Feldt	344.523	1.000	344.523	2.089	.155
	Lower-bound	344.523	1.000	344.523	2.089	.155
Error(Time)	Sphericity Assumed	7587.165	46	164.938		
	Greenhouse-Geisser	7587.165	46.000	164.938		
	Huynh-Feldt	7587.165	46.000	164.938		
	Lower-bound	7587.165	46.000	164.938		
Risk	Sphericity Assumed	1501.914	7	214.559	8.151	.000
	Greenhouse-Geisser	1501.914	4.827	311.138	8.151	.000
	Huynh-Feldt	1501.914	5.462	274.986	8.151	.000
	Lower-bound	1501.914	1.000	1501.914	8.151	.006
Error(Risk)	Sphericity Assumed	8475.649	322	26.322		
	Greenhouse-Geisser	8475.649	222.050	38.170		
	Huynh-Feldt	8475.649	251.242	33.735		
	Lower-bound	8475.649	46.000	184.253		
Time * Risk	Sphericity Assumed	168.786	7	24.112	2.223	.032
	Greenhouse-Geisser	168.786	4.486	37.623	2.223	.060
	Huynh-Feldt	168.786	5.031	33.550	2.223	.052
	Lower-bound	168.786	1.000	168.786	2.223	.143
Error(Time*Risk)	Sphericity Assumed	3493.027	322	10.848		
	Greenhouse-Geisser	3493.027	206.366	16.926		
	Huynh-Feldt	3493.027	231.422	15.094		
	Lower-bound	3493.027	46.000	75.935		

*2*2*2 anova (Between CRT)

➢ **Descriptive Statistics: (CRTHiLow)**

CRTHiLow		N	Mean	Std. Deviation
MeanCrimeDA	low	23	15.7609	3.40306
	high	24	14.3802	4.13470
	Total	47	15.0559	3.81749
MeanCrimeYEAR	low	23	14.0924	5.18811
	high	24	13.4219	6.15910
	Total	47	13.7500	5.65289
MeanHealthDAY	low	23	15.5707	4.07978
	high	24	15.5000	4.63549
	Total	47	15.5346	4.32500
MeanHealthYear	low	23	13.9457	3.78766
	high	24	14.4063	5.63824
	Total	47	14.1809	4.77602

➢ **Test for Main and Interaction effects:**

Here all the factors have just two level so no need for checking condition of Sphericity from Mauchlys table

1. From Test of within subjects table following Greenhouse-Geisser we observe
   There is no significant main or interaction effect.   (All Highlighted by yellow color) As
   - For Time $F_{(1,45)}=1.006$ & P-value $0.321>0.05$
   - Time * CRTHiLow interaction effect $F_{(1,45)}=1.920$ & P-value $0.173>0.05$,
   - For Domain $F_{(1,45)}=2.799$ & P-value $0.101>0.05$
   - For Domain * CRTHiLow interaction effect $F_{(1,45)}=0.151$& P-value $0.699>0.05$.
   - For Time * Domain interaction effect $F_{(1,45)}=0.003$ & P-value $0.954>0.05$.
   - For Time * Domain * CRTHiLow interaction effect $F_{(1,45)}=0.013$ & P-value $0.911>0.05$.

		Tests of Within-Subjects Effects				
Measure: Rate						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Sphericity Assumed	9.170	1	9.170	1.006	.321
	Greenhouse-Geisser	9.170	1.000	9.170	1.006	.321
	Huynh-Feldt	9.170	1.000	9.170	1.006	.321
	Lower-bound	9.170	1.000	9.170	1.006	.321
Time * CRTHiLow	Sphericity Assumed	17.497	1	17.497	1.920	.173
	Greenhouse-Geisser	17.497	1.000	17.497	1.920	.173
	Huynh-Feldt	17.497	1.000	17.497	1.920	.173
	Lower-bound	17.497	1.000	17.497	1.920	.173
Error(Time)	Sphericity Assumed	410.079	45	9.113		
	Greenhouse-Geisser	410.079	45.000	9.113		
	Huynh-Feldt	410.079	45.000	9.113		
	Lower-bound	410.079	45.000	9.113		
Domain	Sphericity Assumed	83.901	1	83.901	2.799	.101
	Greenhouse-Geisser	83.901	1.000	83.901	2.799	.101
	Huynh-Feldt	83.901	1.000	83.901	2.799	.101
	Lower-bound	83.901	1.000	83.901	2.799	.101
Domain * CRTHiLow	Sphericity Assumed	4.525	1	4.525	.151	.699
	Greenhouse-Geisser	4.525	1.000	4.525	.151	.699
	Huynh-Feldt	4.525	1.000	4.525	.151	.699
	Lower-bound	4.525	1.000	4.525	.151	.699
Error(Domain)	Sphericity Assumed	1348.926	45	29.976		
	Greenhouse-Geisser	1348.926	45.000	29.976		
	Huynh-Feldt	1348.926	45.000	29.976		
	Lower-bound	1348.926	45.000	29.976		
Time * Domain	Sphericity Assumed	.025	1	.025	.003	.954
	Greenhouse-Geisser	.025	1.000	.025	.003	.954
	Huynh-Feldt	.025	1.000	.025	.003	.954
	Lower-bound	.025	1.000	.025	.003	.954
Time * Domain * CRTHiLow	Sphericity Assumed	.094	1	.094	.013	.911
	Greenhouse-Geisser	.094	1.000	.094	.013	.911
	Huynh-Feldt	.094	1.000	.094	.013	.911
	Lower-bound	.094	1.000	.094	.013	.911
Error(Time*Domain)	Sphericity Assumed	331.988	45	7.378		
	Greenhouse-Geisser	331.988	45.000	7.378		
	Huynh-Feldt	331.988	45.000	7.378		
	Lower-bound	331.988	45.000	7.378		

2. From Between Subject table we observe there is no significant effect between two low and high group scored CRT. (Highlighted by Blue color)
As here for CRTHiLow $F(1,45)=0.189$ & P-value $0.666>0.05$

Tests of Between-Subjects Effects (CRT)					
Measure: Rate					
Transformed Variable: Average					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	40246.773	1	40246.773	938.966	.000
CRTHiLow	**8.103**	**1**	**8.103**	**.189**	**.666**
Error	1928.829	45	42.863		

*2*2*2 anova (Between REI)

➢ **Descriptive Statistics: (REIHiLow)**

REIHiLow		N	Mean	Std. Deviation
MeanCrimeDAY	low	10	15.6625	2.52766
	high	12	15.0104	4.72555
	Total	22	15.3068	3.81389
MeanCrimeYEAR	low	10	15.0500	4.25620
	high	12	13.8438	5.77394
	Total	22	14.3920	5.06010
MeanHealthDAY	low	10	14.2125	2.35485
	high	12	16.1771	4.62038
	Total	22	15.2841	3.81592
MeanHealthYear	low	10	13.4875	4.59825
	high	12	15.0833	5.29481
	Total	22	14.3580	4.94046

➢ **Test for Main and Interaction effects**

Here all the factors have just two level so no need for checking condition of Sphericity from Mauchlys table.

1. From Test of within subjects table following Greenhouse-Geisser we observe
There is no significant main or interaction effect. Except Time * REIHiLow interaction effect (Insignificant highlighted by yellow color and significant by green color) As

- For Time F(1,20)=0.094 & P-value 0.762>0.05
- Time * REIHiLow interaction effect F(1,20)=7.506 & P-value 0.013<0.05 (Significant)
- For Domain F(1,20)=0.712& P-value 0.409>0.05
- For Domain * REIHiLow interaction effect F(1,20)=0.047& P-value 0.831>0.05.
- For Time * Domain interaction effect F(1,20)=0.000 & P-value 0.985>0.05.
- For Time * Domain * CRTHiLow interaction effect F(1,20)=0.008 & P-value 0.930>0.05.

Tests of Within-Subjects Effects						
Measure: Rate						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Sphericity Assumed	.501	1	.501	.094	.762
	Greenhouse-Geisser	.501	1.000	.501	.094	.762
	Huynh-Feldt	.501	1.000	.501	.094	.762
	Lower-bound	.501	1.000	.501	.094	.762
Time * REIHiLow	Sphericity Assumed	40.040	1	40.040	7.506	.013
	Greenhouse-Geisser	40.040	1.000	40.040	7.506	.013
	Huynh-Feldt	40.040	1.000	40.040	7.506	.013
	Lower-bound	40.040	1.000	40.040	7.506	.013
Error(Time)	Sphericity Assumed	106.684	20	5.334		
	Greenhouse-Geisser	106.684	20.000	5.334		
	Huynh-Feldt	106.684	20.000	5.334		
	Lower-bound	106.684	20.000	5.334		
Doamin	Sphericity Assumed	17.652	1	17.652	.712	.409
	Greenhouse-Geisser	17.652	1.000	17.652	.712	.409
	Huynh-Feldt	17.652	1.000	17.652	.712	.409
	Lower-bound	17.652	1.000	17.652	.712	.409
Doamin * REIHiLow	Sphericity Assumed	1.162	1	1.162	.047	.831
	Greenhouse-Geisser	1.162	1.000	1.162	.047	.831
	Huynh-Feldt	1.162	1.000	1.162	.047	.831
	Lower-bound	1.162	1.000	1.162	.047	.831
Error(Doamin)	Sphericity Assumed	495.738	20	24.787		
	Greenhouse-Geisser	495.738	20.000	24.787		
	Huynh-Feldt	495.738	20.000	24.787		
	Lower-bound	495.738	20.000	24.787		
Time * Doamin	Sphericity Assumed	.002	1	.002	.000	.985
	Greenhouse-Geisser	.002	1.000	.002	.000	.985
	Huynh-Feldt	.002	1.000	.002	.000	.985
	Lower-bound	.002	1.000	.002	.000	.985
Time * Doamin * REIHiLow	Sphericity Assumed	.047	1	.047	.008	.930
	Greenhouse-Geisser	.047	1.000	.047	.008	.930
	Huynh-Feldt	.047	1.000	.047	.008	.930
	Lower-bound	.047	1.000	.047	.008	.930
Error(Time*Doamin)	Sphericity Assumed	117.601	20	5.880		
	Greenhouse-Geisser	117.601	20.000	5.880		
	Huynh-Feldt	117.601	20.000	5.880		
	Lower-bound	117.601	20.000	5.880		

1. From Between Subject table we observe there is no significant effect between two low and high group scored REI. (Highlighted by Blue color)
As for REIHiLow $F(1,20)=0.088$ & P-value $0.770>0.05$

Tests of Between-Subjects Effects					
Measure: Rate					
Transformed Variable: Average					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	19157.277	1	19157.277	427.478	.000
REIHiLow	**3.951**	**1**	**3.951**	**.088**	**.770**
Error	896.293	20	44.815		

Discussion:

1. For Crime score of day was little bit higher than score of year. But it isn't significant.
2. For Health score of day was little bit higher than score of year. But it isn't significant.
3. From within anova design for both Crime and Health we see the rating doesn't change significantly from day format to year format.
4. We also observe in different Risk questions the rating is not significantly changed both for Crime and Health
5. The rating of different risk questions in day format is not significantly different than the rating in year format for Crime but it is significantly different for Health.
6. For different level of CRT the rating is not different between Crime and Health and between day format and year format.
7. The two levels of CRT are not significantly different. (From between subject table)
8. Most of the participant scored same for REI. But 10 of them scored low and 12 scored high.
9. For different levels of REI the rating is not significantly different between Crime and Health but it is significantly different between day format and year format.
10. The two levels of REI are not significantly different. (From between subject table)