# Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Xinxi Cao, Yangyang Cheng, Chenjie Xu, et al.
Risk of Accidents or Chronic Disorders From Improper Use of Mobile Phones: A Systematic Review and Meta-analysis

**Table S1 Literature Search Strategy**

**S1.1 Literature Search Strategy for Database PubMed (Through Apr 4, 2019)**

| | Search Terms | Results |
|---|---|---|
| #1 | Search ("Cell Phone"[Mesh]) OR "Cell Phone Use"[Mesh] | 9,384 |
| #2 | Search ((((((((((((((((((((((((((((((cell phone[Title/Abstract]) OR Phone, Cell[Title/Abstract]) OR Phones, Cell[Title/Abstract]) OR Cellular Phone[Title/Abstract]) OR Cellular Phones[Title/Abstract]) OR Phone, Cellular[Title/Abstract]) OR Phones, Cellular[Title/Abstract]) OR Telephone, Cellular[Title/Abstract]) OR Cellular Telephone[Title/Abstract]) OR Cellular Telephones[Title/Abstract]) OR Telephones, Cellular[Title/Abstract]) OR Cell Phones[Title/Abstract]) OR Portable Cellular Phone[Title/Abstract]) OR Cellular Phone, Portable[Title/Abstract]) OR Cellular Phones, Portable[Title/Abstract]) OR Portable Cellular Phones[Title/Abstract]) OR Transportable Cellular Phone[Title/Abstract]) OR Cellular Phone, Transportable[Title/Abstract]) OR Cellular Phones, Transportable[Title/Abstract]) OR Transportable Cellular Phones[Title/Abstract]) OR Mobile Phone[Title/Abstract]) OR Mobile Phones[Title/Abstract]) OR Phone, Mobile[Title/Abstract]) OR Phones, Mobile[Title/Abstract]) OR Mobile Telephone[Title/Abstract]) OR Mobile Telephones[Title/Abstract]) OR Telephone, Mobile[Title/Abstract]) OR Telephones, Mobile[Title/Abstract]) OR Car Phone[Title/Abstract]) OR Car Phones[Title/Abstract]) OR Phone, Car[Title/Abstract]) OR Phones, Car[Title/Abstract] | 13,041 |
| #3 | Search (((((((((Cell phone use[Title/Abstract]) OR Cell Phone Uses[Title/Abstract]) OR Phone Use, Cell[Title/Abstract]) OR Use, Cell Phone[Title/Abstract]) OR Uses, Cell Phone[Title/Abstract]) OR Mobile Phone Use[Title/Abstract]) OR Mobile Phone Uses[Title/Abstract]) OR Phone Use, Mobile[Title/Abstract]) OR Use, Mobile Phone[Title/Abstract]) OR Uses, Mobile Phone[Title/Abstract] | 10,681 |
| #4 | Search (#1 OR #2 OR #3) | 16,595 |
| #5 | Search ((((((((((Hurt*[Title/Abstract]) OR Injur*[Title/Abstract]) OR Harm*[Title/Abstract]) OR Disadvantage*[Title/Abstract]) OR Endanger*[Title/Abstract]) OR Jeopard*[Title/Abstract]) OR Damage*[Title/Abstract]) OR Threat*[Title/Abstract]) OR Menace[Title/Abstract]) OR Imperil*[Title/Abstract] | 1,482,550 |
| #6 | Search (#4 AND #5) | 1,254 |

## S1.2 Literature Search Strategy for Database Embase (Through Apr 4, 2019)

| | Search Terms | Results |
|---|---|---|
| #1 | 'cell phone':ab,ti OR 'phone, cell':ab,ti OR 'phones, cell':ab,ti OR 'cellular phone':ab,ti OR 'cellular phones':ab,ti OR 'phone, cellular':ab,ti OR 'phones, cellular':ab,ti OR 'telephone, cellular':ab,ti OR 'cellular telephones':ab,ti OR 'telephones, cellular':ab,ti OR 'cell phones':ab,ti OR 'portable cellular phone':ab,ti OR 'cellular phone, portable':ab,ti OR 'cellular phones, portable':ab,ti OR 'portable cellular phones':ab,ti OR 'transportable cellular phone':ab,ti OR 'cellular phone, transportable':ab,ti OR 'cellular phones, transportable':ab,ti OR 'transportable cellular phones':ab,ti OR 'mobile phone':ab,ti OR 'mobile phones':ab,ti OR 'phone, mobile':ab,ti OR 'phones, mobile':ab,ti OR 'mobile telephone':ab,ti OR 'mobile telephones':ab,ti OR 'telephone, mobile':ab,ti OR 'telephones, mobile':ab,ti OR 'car phone':ab,ti OR 'car phones':ab,ti OR 'phone, car':ab,ti OR 'phones, car':ab,ti OR 'cellular telephone':ab,ti | 12.640 |
| #2 | 'cell phone use':ab,ti OR 'cell phone uses':ab,ti OR 'phone use, cell':ab,ti OR 'use, cell phone':ab,ti OR 'uses, cell phone':ab,ti OR 'mobile phone use':ab,ti OR 'mobile phone uses':ab,ti OR 'phone use, mobile':ab,ti OR 'use, mobile phone':ab,ti OR 'uses, mobile phone':ab,ti | 1,174 |
| #3 | #1 OR #2 | 12,640 |
| #4 | hurt*:ab,ti OR injur*:ab,ti OR harm*:ab,ti OR disadvantage*:ab,ti OR endanger*:ab,ti OR jeopard*:ab,ti OR damage*:ab,ti OR threat*:ab,ti OR menace:ab,ti OR imperil*:ab,ti | 1,896,075 |
| #5 | #3 AND #4 | 1,140 |

## S1.3 Literature Search Strategy for Database Web of Science (Through Apr 4, 2019)

| | Search Terms | Results |
|---|---|---|
| #1 | TS=("cell phone" OR "Phone, Cell" OR "Phones, Cell" OR "Cellular Phone" OR "Cellular Phones" OR "Phone, Cellular" OR "Phones, Cellular" OR "Telephone, Cellular" OR "Cellular Telephone" OR "Cellular Telephones" OR "Telephones, Cellular" OR "Cell Phones" OR "Portable Cellular Phone" OR "Cellular Phone, Portable" OR "Cellular Phones, Portable" OR "Portable Cellular Phones" OR "Transportable Cellular Phone" OR "Cellular Phone, Transportable" OR "Cellular Phones, Transportable" OR "Transportable Cellular Phones" OR "Mobile Phone" OR "Mobile Phones" OR "Phone, Mobile" OR "Phones, Mobile" OR "Mobile Telephone" OR "Mobile Telephones" OR "Telephone, Mobile" OR "Telephones, Mobile" OR "Car Phone" OR "Car Phones" OR "Phone, Car" OR "Phones, Car") | 17,303 |
| #2 | TS=(Cell phone use OR Cell Phone Uses OR Phone Use, Cell OR Use, Cell Phone OR Uses, Cell Phone OR Mobile Phone Use OR Mobile Phone Uses OR Phone Use, Mobile OR Use, Mobile Phone OR Uses, Mobile Phone) | 12,134 |
| #3 | #1 OR #2 | 18,644 |
| #4 | TS=(Hurt* OR Injur* OR Harm* OR Disadvantage* OR Endanger* OR Jeopard* OR Damage* OR Threat* OR Menace OR Imperil*) | 1,778,599 |
| #5 | #3 AND #4 | 1,494 |

## S1.4 Literature Search Strategy for Database Cochrane Library (Through Apr 4, 2019)

| | Search Terms | Results |
|---|---|---|
| #1 | cell phone OR Phone, Cell OR Phones, Cell OR Cellular Phone OR Cellular Phones OR Phone, Cellular OR Phones, Cellular OR Telephone, Cellular OR Cellular Telephone OR Cellular Telephones OR Telephones, Cellular OR Cell Phones OR Portable Cellular Phone OR Cellular Phone, Portable OR Cellular Phones, Portable OR Portable Cellular Phones OR Transportable Cellular Phone OR Cellular Phone, Transportable OR Cellular Phones, Transportable OR Transportable Cellular Phones OR Mobile Phone OR Mobile Phones OR Phone, Mobile OR Phones, Mobile OR Mobile Telephone OR Mobile Telephones OR Telephone, Mobile OR Telephones, Mobile OR Car Phone OR Car Phones OR Phone, Car OR Phones, Car | 3,786 |
| #2 | Cell phone use OR Cell Phone Uses OR Phone Use, Cell OR Use, Cell Phone OR Uses, Cell Phone OR Mobile Phone Use OR Mobile Phone Uses OR Phone Use, Mobile OR Use, Mobile Phone OR Uses, Mobile Phone | 2,475 |
| #3 | #1 OR #2 | 3,786 |
| #4 | Hurt* OR Injur* OR Harm* OR Disadvantage* OR Endanger* OR Jeopard* OR Damage* OR Threat* OR Menace OR Imperil* | 90,667 |
| #5 | #3 AND #4 | 337 |

**Table S2 Basic characteristics of 41 studies included.**

| First author (year) | Study area, country | Sample size | Sample age (yrs, range and/or mean±SD) | Statistical model | Measures of cell phone usage | Other factors adjusted for in the model | Measures of outcome-related behavior | Outcomes |
|---|---|---|---|---|---|---|---|---|
| **Transport injury** | | | | | | | | |
| **Issar (2013)[19]** | Nashville, US | 177 | Group A:38.0<br>Group B:44.4 | Logistic models | Cell phone usage | NA | Motor vehicle collisions, and automobile involvement in trauma | Motor vehicle collision frequency |
| **Truong (2019)[20]** | Vietnam | 665 | M=21.9 in 2016 | Binary logistic regression | Using a mobile phone (for calling, texting, and searching for information) | NA | Whether involved in a crash/fall while riding a motorcycle | Motorcycle and crashesy |
| **García-España (2009)[21]** | US | 2,167 | Shared Access:16.7±0.06<br>Primary Access:17.0±0.06 | Multivariable logistic regression model | Use cellular telephones while driving | Vehicle type, age, grade, gender, race/ethnicity, urbanicity, school grades, socioeconomic level, working at a job, and reported hours per week of driving | Crash Involvement | Driving Behaviors and Crashes |
| **Pileggi (2006)[22]** | Italy | 894 | M=17.2 in 2004 | Multiple logistic regression models | Used cell phones while motorcycling | NA | Behavior while driving a motorcycle; traffic-related accidents | Risky behaviors among motorcycling |
| **Labergenadeau (2003)[23]** | Canada | 36,078 | 16-64 in 1996-1999 | Multiple logistic regression models | Whether use cell phone when driving | Age | At least one accident in a given year | Road crashes |
| **Donmez (2015)[34]** | US | 15,406,515 | NA | Logit model | Talking on a cell phone, dialing/texting on a cell phone while driving | Environmental conditions, crash profile, vehicle model year, and driver information | Driving injury severity | Driver injury |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Oxley (2013)[35]** | Malaysia | 1,750 | >18 | Hierarchical logistic regression model | Checking sms while riding | NA | Crash involvement | Commuter motorcycle crashes |
| **Vafaeenajar (2011)[36]** | Iran | 312 | 37.4±10.3 in 2007 | Logistic regression model | Whether or not use hand phone while driving | NA | Accidents resulted in casualties<br>Accidents without casualties | Accidents injuries |
| **Redelmeier (1997)[38]** | Toronto, Canada | 699 | NA | Conditional logistic-regression | Texting or using Internet<br>Dialing Talking<br>Reaching for phone | NA | Motor Vehicle Crash or Near-Crash | Road Crashes |
| **Guo (2019)[39]** | US | 102 | NA | Semiparametric Bayesian model with logit link | Type of cellular telephone when driving | Age, sex, visual acuity, training, personality, driving record | Motor Vehicle Collision | Motor vehicle collisions |
| **Klauer (2014)[53]** | US | 151 | 36.2±14.4 | Logistic-regression analysis | Driver behavior, such as distraction | NA | Traffic crashes | Driving risk |
| **Khadem-Rezaiyan (2017)[43]** | Mashhad, Iran | 431 | 30±11.3 in 2014 | Logistic regression | Whether or not using a cell phone | NA | History of previous car accidents | Driving risk |
| **Asbridge (2013)[45]** | British Columbia, Canada | 1,091 | Above 16 in 2005–2008 | Logit regression | Whether or not using a cell phone at the time of the crash | Age, licence status | Drive crashes | Traffic crash |
| **da Silva (2012)[46]** | Brazil | 750 | 29.5±8.1 in 2005 | Multivariate analysis | Use of cell phone while driving | NA | Road accidents | Road Traffic Crash |
| **Asefa (2015)[47]** | Vietnam | 712 | 26 (19-60) in 2014 | Multivariate logistic regression | Method of receiving mobile calls when driving | NA | Involved in a road traffic crash | Road Traffic Crash |

**Chronic injury**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Zhang (2016)[14]** | Chongqing, China | 2,028 | 20.4±1.2 in 2013 | Multilevel linear regression | The duration of cell phone use | Including age, duration of abstinence, BMI, smoking and drinking status, and cola, coffee, and fried food consumption | The position in which they carry the cell Phone<br>Talking on the cell phone<br>Internet use via cellular network | Male reproductive health |
| **Ryan (2005)[15]** | Massachusetts, US | 153 | 36.0 in 2008 | Linear mixed-effects models | Mobile phone use duration (use or not) and location | Age, race, BMI, and abstinence time | Semen was collected on site at MGH | Male reproductive health |
| **Byun (2013)[16]** | Korea | 2,422 | 8.94±0.74 in 2008 | Logistic regression | The ownership of a mobile phone by children<br>Mobile phone accessibility | Age, gender, number of siblings, residential area, household income, maternal smoking during pregnancy, child's history of neuropsychiatric illness, parental marital status, parental history of neuropsychiatric disease, blood lead levels | Measured Blood Lead<br>ADHD rating scale | Attention Deficit Hyperactivity Symptoms |
| **Sudan (2012)[17]** | Denmark | 52,680 | Children in 7 years | Logistic regression models | Whether or not the mother used a cell phone while she was pregnantWhether or not children use a cell phone | Age, mother's history of migraines, mother's feelings of worry, burden, and stress during pregnancy, social occupational status, child's exposure to tobacco smoke, and child's sex | Measured migraines | Headaches |
| **Simşek (2003)[18]** | NA | 20 | 33.9 ± 11.4 in 2001 | Wilcoxon paired signed ranks test | Carry cellular telephones constantly in the on position for 30 days | NA | Free and total PSA levels | Serum PSA levels |
| **Souza (2014)[24]** | NA | 45 | 1: 32.73±9.03<br>2: 31.87±9.78<br>3: 32.53±9.61 | Conditional Test | Mean length of time spent on conversations using mobile phones per week | NA | Oral mucosa cells | Oral epithelium |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Khalil (2014)[25]** | NA | 12 | M=22 | ANOVA | Before they started cell phone call, after 15 min and 30 min directly at the end of the call | NA | Determination of 8-OxodG<br>Determination of MDA<br>The salivary oxidative stress indices HORAC and ORAC | Oral saliva |
| **Luo (2018)[26]** | Connecticut, US | 960 | 21-84 in 2010 and 2011 | Multivariate unconditional logistic regression | The frequency, duration, and protective behaviors of cell phone use | Age, sex, education, family history of thyroid cancer, alcohol consumption, body mass index, previous benign thyroid diseases, occupational radiation exposure, and radiation treatment | Histologic subtype and tumor size, thyroid cancer | Thyroid cancer |
| **Hardell (2002)[27]** | Sweden | 2,606 | 20-80, M=54 | Conditional logistic regression analysis | Type of phone, years of use and brand name | NA | Brain tumour | Brain tumour |
| **Khadra (2015)[49]** | NA | 12 | M=22 | ANOVA | Before the start of call as well as 15 min and 30 min immediately after calls | NA | Biochemical status in the saliva before/after using mobile phone | Oral saliva |
| **Hardell (2013)[50]** | Sweden | 2,466 | 20-80, M=55 | Cox proportional model | Type, time period, average number of minutes per day over the years, ear mostly used during calls (not for deceased subjects), use of hands-free devices and use of | Age, gender, year of diagnosis, socioeconomic code and study | The survival of patients with a malignant brain tumour in relation to the use of wireless phones | Glioma |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | external antenna in a car | | | |
| **Tiwari (2008)[28]** | NA | 6 | 20-24 | Student's t test | Radio frequency (RF) signal from Code Division Multiple Access (CDMA) mobile phones | NA | Assess the DNA damage | DNA Integrity |
| **Gadhia (2003)[29]** | NA | 48 | Group 1: M=32<br>Group 2: M=30 | Student's t test | Using digital mobile phones over the last 2 years | NA | Chromosomal aberrations | Chromosomal Damage |
| **Çam (2012)[30]** | NA | 8 | 30-47 | Paired t test | Radio frequency radiation(RFR) | NA | Measure DNA breaks | Single-strand DNA breaks |
| **Lai (2014)[31]** | Hong Kong, China | 31 | 21.7±1.5 | ANCOVA | Simulate text messaging Rapid keying task using the same mobile phone | NA | Wrist extension | Wrist extension |
| **Renuka Devi (2014)[32]** | NA | 50 | NA | ANOVA | Text messaging | NA | Repetitive stress injury (RSI) | Thumb Muscle |
| **Mortazavi (2013 )[37]** | NA | 30 | NA | T-test and analysis of variance | Radio frequency (RF) radiations | NA | Total motility score in sperms | Male reproductive health |
| **Zeni (2005)[33]** | NA | 10 | 32.4±2.7 | Student's t test | Exposure to 900 MHz RF Field | NA | Chromosome aberrations | Genotoxic Effects |
| **Ramya (2011)[54]** | NA | 50 | 15-40 | Paired t test | Time of use mobile phones | NA | Hearing threshold | Hearing |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Hardell (2003)[40]** | Sweden | 3,234 | median age: 54 years | Logistic regression analysis | Type of phone<br>Years of cell phone use<br>Mean number of daily calls and minutes | Age, sex and SEI | Report histopathology diagnosis of brain tumour | Hearing |
| **Söderqvist[1] (2009)[41]** | Örebro, Sweden | 313 | 18-65 in 2007 | Unconditional logistic regression | Tested long-term and/or short-term use of wireless telephones | Age adjusted for in all analyses<br>Sex adjusted in analyses of total samples | Blood samples were analyzed for serum transthyretin concentrations | Blood-cerebrospinal fluid barrier |
| **Söderqvist[2] (2009)[42]** | Örebro, Sweden | 314 | 41.7(18–65) in 2007 | Unconditional logistic regression | Use of wireless phones | Gender and time of blood sampling | Serum S100B levels | Serum S100B levels |
| **Darvishi (2019)[44]** | NA | 100 | 23.5±4.9 in 2016-2017 | ANOVA | Average duration of mobile use | NA | Measured discomfort, anger, anxiety, and insecurity | Nomophobia |
| **Fuller (2017)[48]** | Pennsylvania, US | 207 | 8-17 in 2016 | Logistic regression | Access to cell phone at bedtime | NA | Measured BMI<br>Participants to be tired | Sleep Problems<br>Overweight |
| **Mortazavi Joowon (2016)[51]** | Korea | 715 | 15 in 2013 | Logistic regression models | The average number of hours | Age, sex, daily sleep duration, use of contact lenses, computer use and city | Symptoms in ocular health | Ocular Health |
| **Moon (2014)[52]** | Korea | 288 | Dry: 11.00±0.61<br>Normal: 10.87±0.66 | Linear regression | Smartphones and use time per day | NA | Ocular symptoms for dry eye | Dry eye disease |

**Table S3 Quality assessment**

**S3.1. Quality assessment of included case-control studies in the Meta-analysis using the Newcastle-Ottawa Scale (NOS)#**

| Source | Case Definition | Representativeness of the Cases | Selection of Controls | Definition of Controls | Comparability of Cases and Controls | Ascertainment of Exposure | Same Method of Ascertainment for Cases and Controls | Nonresponse Rate | Total NOS Score |
|---|---|---|---|---|---|---|---|---|---|
| Souza (2014) | * | * | * | * | * | * | * | * | 8 |
| Khalil (2014) | * | * | * | * | | * | * | * | 7 |
| Luo (2018) | * | * | | * | ** | * | * | * | 8 |
| Hardell (2002) | * | * | | * | * | * | * | * | 7 |
| Abu Khadra (2014) | * | * | * | * | * | * | * | * | 8 |
| Hardell (2013) | * | * | | * | * | * | * | * | 7 |
| Tiwari (2008) | * | * | * | * | * | * | * | * | 8 |
| Zeni ,2005) | * | | * | * | | * | * | * | 6 |
| Gadhia (2003) | * | * | * | * | * | * | * | * | 8 |
| Çam (2012) | * | * | * | * | * | * | * | * | 8 |
| Lai (2014) | * | * | * | * | * | * | * | * | 8 |
| Renuka Devi (2014) | * | * | * | * | * | * | * | * | 8 |
| Donmez (2015) | | * | * | * | | * | * | * | 6 |
| Oxley (2013) | * | * | * | * | | * | * | * | 7 |
| Vafaeenajar (2011) | * | * | * | | * | * | * | * | 7 |
| Mortazavi (2013) | * | * | * | * | * | * | * | * | 9 |
| Redelmeier (1997) | * | * | * | * | ** | * | * | * | 9 |
| Guo (2019) | * | * | * | * | * | * | * | * | 8 |
| Siebe (2014) | * | * | * | * | | * | * | * | 7 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Ramya (2011)** | * | * | * | * | | * | * | * | **7** |
| **Hardell (2003)** | * | * | * | * | ** | * | * | * | **9** |
| **Asbridge (2013)** | * | * | * | * | ** | * | * | * | **9** |

# Article quality was assessed as follows: low quality = 0–5; moderate quality = 6–7; high quality = 8–9.

**S3.2. Quality assessment of included cohort studies in the Meta-analysis using the Newcastle-Ottawa Scale (NOS)#**

| Source | Representativeness of the exposed cohort | Selection of the non exposed cohort | Ascertainment of exposure | Demonstration that outcome of interest was not present at start of study | Comparability of cohorts | Assessment of outcome | follow-up long enough | Adequacy of follow up of cohorts | Total NOS Score |
|---|---|---|---|---|---|---|---|---|---|
| **Zhang (2016)** | * | * | * | | * | * | * | * | **7** |
| **Ryan (2017)** | * | * | * | * | ** | * | * | * | **9** |
| **Byun (2013)** | * | * | * | | * | * | * | * | **7** |
| **Sudan (2011)** | * | * | * | * | * | * | * | | **7** |
| **Simşek (2003)** | * | * | * | * | * | * | | * | **7** |
| **Issar (2013)** | * | | * | * | * | * | | * | **6** |
| **Truong (2019)** | * | * | * | * | * | * | | * | **7** |
| **García-España (2009)** | * | * | * | * | * | * | | * | **7** |
| **Pileggi (2006)** | * | * | * | * | * | * | | * | **7** |
| **Labergenadeau (2003)** | * | * | * | * | * | * | | * | **7** |

# Article quality was assessed as follows: low quality = 0–5; moderate quality = 6–7; high quality = 8–9.

**S3.3. Quality assessment of included cross-sectional studies in the Meta-analysis Using Agency for Healthcare Research and Quality (AHRQ) Standards#**

| Source | Söderqvist F[1] (2009) | Söderqvist F[2] (2009) | Rezaiyan (2017) | Darvishi (2019) | da Silva (2012) | Asefa (2015) | Fuller (2017) | Mortazavi Joowon (2016) | Moon(2014) |
|---|---|---|---|---|---|---|---|---|---|
| **Define the source of information** | * | * | * | * | * | * | * | * | * |
| **Inclusion and exclusion criteria** | * | * | * | * | | | * | * | * |
| **Time period used for identifying patients** | * | * | | | * | * | * | * | * |
| **Subjects were consecutive** | * | * | * | * | * | * | * | * | * |
| **If subjective components of study were masked** | | | | | | | | | |
| **Assessments for quality assurance purposes** | * | * | | | | * | * | | * |
| **Explain any patient exclusions from analysis** | * | * | * | * | * | | * | * | * |
| **Describe how confounding was assessed and/or controlled** | * | * | * | | * | | | * | |
| **Explain how missing data were handled in the analysis** | | | | | | | | | |
| **Summarize patient response rates and completeness** | * | * | * | * | * | * | * | * | * |
| **Clarify follow-up was obtained** | | | | | | | | | |
| **Total Scores** | **8** | **8** | **6** | **5** | **6** | **5** | **7** | **7** | **7** |

# Article quality was assessed as follows: low quality = 0–3; moderate quality = 4–7; high quality = 8–11.

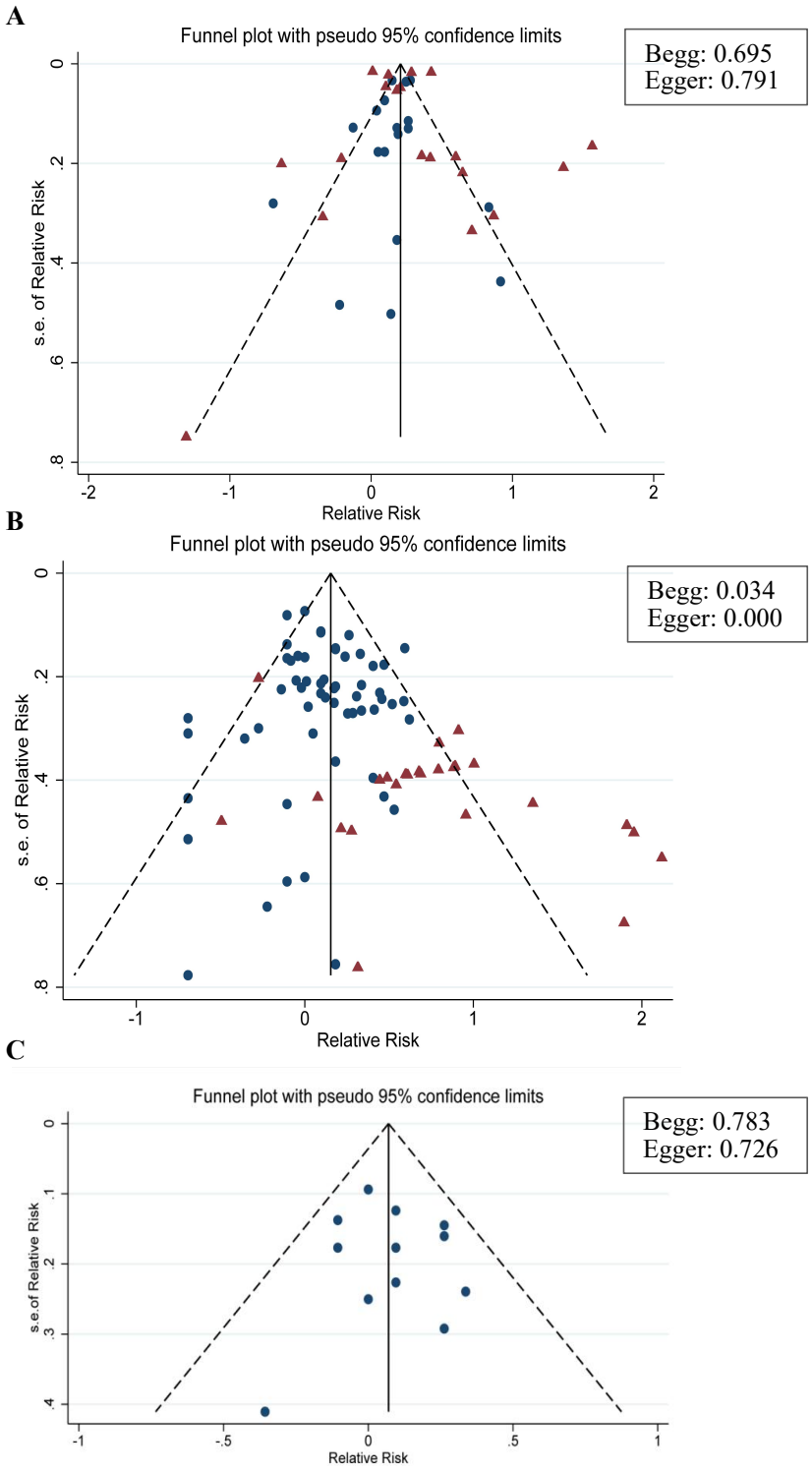


**Figure S1 Funnel plot with pseudo 95% confidence limits (Begg's test and Egger's test).**
(Panel A shows cell phone use or not and transport and chronic injury; Panel B shows cell phone use duration and transport and chronic injury; Panel C shows cell phone use site and chronic injury.)