**Tables**

**Table 1:** Search strategies used for literature databases

|  |  |  |  |
| --- | --- | --- | --- |
| Database | Query | Result | Date |
| PubMed | ((organophosphorus poison\* OR Organophosphorus intoxicat\* OR ) OR (organophosph\* AND poison\*) OR (organophosph\* AND intoxicat\*) OR (organophosph\* AND toxic\*)) AND (Nepal\*) | 77 | December 13, 2024 |
| [Web of Science](https://www.webofscience.com/wos/woscc/basic-search" \t "https://cn.bing.com/_blank) Core Collection | ALL=((organophosphorus poison\* OR Organophosphorus intoxicat\*) OR (organophosph\* AND poison\*) OR (organophosph\* AND intoxicat\*) OR (organophosph\* AND toxic\*)) AND ALL=Nepal\* | 43 | December 13, 2024 |
| Cochrane Library | ((organophosphorus poison\* OR Organophosphorus intoxicat\*) OR (organophosph\* AND poison\*) OR (organophosph\* AND intoxicat\*) OR (organophosph\* AND toxic\*)) AND Nepal\* | 8 | December 13, 2024 |
| Ovid | ((organophosphorus poison\* or Organophosphorus intoxicat\* or (organophosph\* and poison\*) or (organophosph\* and intoxicat\*) or (organophosph\* and toxic\*)) and Nepal\*).af. | 186 | December 13, 2024 |
| Springer | ((organophosphorus poison\* OR Organophosphorus intoxicat\*) OR (organophosph\* AND poison\*) OR (organophosph\* AND intoxicat\*) OR (organophosph\* AND toxic\*)) AND Nepal\* | 109 | December 13, 2024 |

Description: First, a search strategy was developed, and the major databases, including PubMed, [Web of Science](https://www.webofscience.com/wos/woscc/basic-search" \t "https://cn.bing.com/_blank) Core Collection (WoSCC), Cochrane Library, Ovid, and Springer, were searched separately until December 13, 2024. All studies were included in the meta-analysis. A total of 423 studies were obtained from the different databases. The search strategies used for the different databases are listed in [Table 1](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8195673/" \l "supplementary-material-1).

**Table 2:** Basic characteristics of the included studies

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Included study | Study design | Number of \*OPP | Total included | Gender | | Setting | Study Area | PR(%)\* |
|  |  |  |  | Male | Female |  |  |  |
| Dea Haagensen Kofod, 2016(13) | A randomized, double-blind, placebo-controlled, crossover trial | 6 | 42 | N/A | N/A | Community-based | Chitwan | 14.3 |
| Roshana Shrestha, 2021(14) | Cross-sectional observational study | 66 | 117 | N/A | N/A | Hospital-based | Kathmandu | 56.4 |
| Basudev Subedi, 2023(11) | Cross-sectional study | 92 | 172 | 44 | 128 | Hospital-based | Kathmandu | 53.5 |
| Angela Basnet, 2021(3) | Retrospective hospital record-based study | 71 | 134 | 29 | 42 | Hospital-based | Banepa | 44.7 |
| Rakesh Ghimire, 2021(5) | Retrospective study | 1463 | 2535 | N/A | N/A | Hospital And Community-Based | 9 different districts of Nepal (Kathmandu, Lalitpur, Kabhrepalanchowk, Kaski, Rupandehi, Chitwan, Janakpur, Sunsari and Banke) | 57.7 |
| Sameer Thapa, 2020(15) | Cross-sectional study | 18 | 76 | N/A | N/A | Hospital-based | Kathmandu | 23.7 |
| Rajesh Kumar Shah, 2021(16) | Cross-sectional study | 33 | 78 | N/A | N/A | Hospital-based | Morang | 42.3 |
| Subhash Pandey, 2022(17) | Cross-sectional study | 203 | 427 | 81 | 122 | Hospital-based | Bardiya | 47.5 |
| Suzit Bhusal, 2022(18) | Cross-sectional study | 50 | 1108 | 16 | 34 | Hospital-based | Kathmandu | 4.5 |
| Abdul Sami Khan, 2023(19) | Cross-sectional study | 24 | 63 | 35 | 28 | Hospital-based | Kathmandu | 38.1 |
| Surabhi Aryal, 2024(20) | Cross-sectional study | 15 | 57 | 20 | 37 | Hospital-based | Kathmandu | 26.3 |
| Note: \*OPP:organophosphate poisoning; PR:prevalence rate | | | | | | | | |

**Table 3 :** Risk of bias of included studies

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Risk of Bias Domains | | | | | | | | |  |  |
| No | Authors | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Total score | Overall |
| 1 | Dea Haagensen Kofod, 2016(13) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 77.78 | B |
| 2 | Roshana Shrestha, 2021(14) | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 55.56 | B |
| 3 | Basudev Subedi, 2023(11) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 88.89 | A |
| 4 | Angela Basnet, 2021(3) | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 77.78 | B |
| 5 | Rakesh Ghimire, 2021(5) | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 55.56 | B |
| 6 | Sameer Thapa, 2020(15) | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 66.67 | B |
| 7 | Rajesh Kumar Shah, 2021(16) | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 66.67 | B |
| 8 | Subhash Pandey, 2022(17) | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 77.78 | B |
| 9 | Suzit Bhusal, 2022(18) | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 77.78 | B |
| 10 | Abdul Sami Khan, 2023(19) | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 66.67 | B |
| 11 | Surabhi Aryal, 2024(20) | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 66.67 | B |
| **Risk of Bias Legend** | | | |  |  |  |  |  |  |  |  |  |
| Item 1.Bias arising from the sample frame | | | | | | | | | | A=low risk of bias | | |
| Item 2.Bias arising from inappropriate sampling | | | | | | | | | | B=moderate risk of bias | | |
| Item 3.Bias from a sample size | | | | | | | | | | C=high risk of bias | | |
| Item 4.Bias due to study subjects and setting | | | | | | | | | |  |  |  |
| Item 5.Bias due to analysis conducted with insufficient coverage of the identified sample | | | | | | | | | |  |  |  |
| Item 6.Bias due to methods used for the identification of the condition | | | | | | | | | |  |  |  |
| Item 7.Bias in the reliability of the measurement of the coverage of the identified sample | | | | | | | | | |  |  |  |
| Item 8.Bias during statistical analysis | | | | | | | | | |  |  |  |
| Item 9.Bias arising from response rate adequate | | | | | | | | | |  |  |  |
| Note: (yes=1), (no=0), and (unclear or not applicable=0). | | | | | | | | | | | | |

**Table 4 :** Subgroup analysis of organophosphate poisoning rate in Nepal

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Group** | **No. of included studies** | **Result of Heterogeneity** | | **Effect model** | **Results of Meta-analysis** | |
|  |  | P | I2 |  | OPP rate\* | 95% CI |
| **Setting** |  |  |  |  |  |  |
| Hospital-based | 9 | <0.0001 | 98.80% | Random | 36.90% | 24.2-50.6 |
| Community-based | 2 | <0.0001 | 97.20% | Random | 35.22% | 2.8-79.1 |
| **Study Area** |  |  |  |  |  |  |
| Other cities-based\*\* | 5 | <0.0001 | 92.70% | Random | 43.38% | 29.0-58.4 |
| Kathmandu-based\*\*\* | 7 | <0.0001 | 99.60% | Random | 35.41% | 19.5-53.2 |
| Note: \*OPP rate:organophosphate poisoning rate  \*\*One study contain both Kathmandu and other cities by Rakesh Ghimire, 2021(5)  \*\*\*One study contain both Kathmandu and other cities by Rakesh Ghimire, 2021(5) | | | | | | |