

評価対象論文リスト(要因:社会経済状況(SES)、アウトカム:早産・低出生体重児・在胎不当過小児)

評価判定日:2023/12/22

①既存の系統的レビュー・メタ解析・統合解析

|   |   |
|---|---|
| 1 | Amjad S, MacDonald I, Chambers T, et al. Social determinants of health and adverse maternal and birth outcomes in adolescent pregnancies: A systematic review and meta-analysis. <i>Paediatric Perinatal Epid.</i> 2019;33(1):88-99. doi:10.1111/ppe.12529                        |
| 2 | Silvestrin S, Da Silva CH, Hirkata VN, Goldani AAS, Silveira PP, Goldani MZ. Maternal education level and low birth weight: a meta-analysis. <i>Jornal de Pediatria.</i> 2013;89(4):339-345. doi:10.1016/j.jped.2013.01.003   |
| 3 | Godah MW, Beydoun Z, Abdul-Khalek RA, Safieddine B, Khamis AM, Abdulrahim S. Maternal education and low birth weight in low- and middle-income countries: systematic review and meta-analysis. <i>Matern Child Health J.</i> 2021;25(8):1305-1315. doi:10.1007/s10995-021-03133-3 |
| 4 | Ruiz M, Goldblatt P, Morrison J, et al. Mother's education and the risk of preterm and small for gestational age birth: a DRIVERS meta-analysis of 12 European cohorts. <i>J Epidemiol Community Health.</i> 2015;69(9):826-833. doi:10.1136/jech-2014-205387                     |
| 5 | Lui K, Lee SK, Kusuda S, et al. Trends in outcomes for neonates born very preterm and very low birth weight in 11 high-income countries. <i>The Journal of Pediatrics.</i> 2019;215:32-40.e14. doi:10.1016/j.jpeds.2019.08.020  |

②日本人集団の個別疫学研究

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|----|---|
| 6  | Hayashi I, Takakura K, Yamaguchi K, et al. Association between socioeconomic status and small-for-gestational-age in Japan: A single center retrospective cohort study. <i>J of Obstet and Gynaecol.</i> 2020;46(1):110-118. doi:10.1111/jog.14069  |
| 7  | Fujiwara T, Ito J, Kawachi I. Income inequality, parental socioeconomic status, and birth outcomes in Japan. <i>American Journal of Epidemiology.</i> 2013;177(10):1042-1052. doi:10.1093/aje/kws355  |
| 8  | Okui T, Ochiai M, Nakashima N. An association between maternal occupations and low birth weight infants in Japan from 1995 to 2015. <i>IJERPH.</i> 2021;18(15):8040. doi:10.3390/ijerph18158040   |
| 9  | Okui T, Nakashima N. Analysis of differences in preterm birth rates according to household occupation in Japan from 2007 to 2019. <i>J Prev Med Public Health.</i> 2022;55(4):371-378. doi:10.3961/jpmph.22.178   |
| 10 | Tamura N, Hanaoka T, Ito K, et al. Different risk factors for very low birth weight, term-small-for-gestational-age, or preterm birth in Japan. <i>IJERPH.</i> 2018;15(2):369. doi:10.3390/ijerph15020369   |
| 11 | Tamura N, Hanaoka T, Ito K, et al. Mediating factors between parental socioeconomic status and small for gestational age in infants: results from the Hokkaido study on environment and children's health. <i>Matern Child Health J.</i> 2021;25(4):645-655. doi:10.1007/s10995-020-03035-w |
| 12 | Okui T, Nakashima N. Analysis of association between low birth weight and socioeconomic deprivation level in Japan: an ecological study using nationwide municipal data. <i>matern health, neonatol and perinatol.</i> 2022;8(1):8. doi:10.1186/s40748-022-00143-z                          |

(収入:income)

■コホート研究(コホートのプール解析含む)

| Reference  |  |                                     | Study subjects |                    |                    |                |                                    |                    | Category | Number among cases | Relative risk (95%CI or p) | P for trend        | Confounding variables considered | Magnitude of association |      |      |                   |      |   |
|--|--|-------------------------------------|----------------|--------------------|--------------------|----------------|------------------------------------|--------------------|----------|--------------------|----------------------------|--------------------|----------------------------------|--------------------------|------|------|-------------------|------|---|
| Author   | Title  | Year                                | Study period   | Number of subjects | Source of subjects | Event followed | Number of incident cases or deaths | Participant's race |          |                    |                            |                    |                                  |                          |      |      |                   |      |   |
| Tamura N, Hanaoka T, Ito K, Araki A, Miyashita C, Ito S, Minakami H, Cho K, Endo T, Sengoku K, Ogasawara K, Kishi R. | Different Risk Factors for Very Low Birth Weight, Term-Small-for-Gestational-Age, or Preterm Birth in Japan  | Household income (million yen)      | 2018           | 2002-2013          | 18059              | single cohort  | VLBW(<1500g)                       | 74                 | Japanese | < 3.0              | 8                          | 0.58 (0.26- 1.29)  | 0.16                             | crude                    | ↓    |      |                   |      |   |
|  |  |                                     |                |                    |                    |                |                                    |                    |          | 3.0-4.9            | 27                         | reference          |                                  |                          |      |      |                   |      |   |
|  |  |                                     |                |                    |                    |                |                                    |                    |          | 5.0-7.9            | 19                         | 1.18 (0.64 , 2.15) |                                  |                          |      | 0.6  | -                 |      |   |
|  |  |                                     |                |                    |                    |                |                                    |                    |          | >-8                | 4                          | 0.81 (0.28, 2.38)  |                                  |                          |      | 0.69 | -                 |      |   |
|  |  |                                     |                |                    |                    |                |                                    |                    |          | PTB                | 805                        | < 3.0              |                                  |                          |      | 120  | 0.83 (0.67-1.02)  | 0.08 | - |
|  |  |                                     |                |                    |                    |                |                                    |                    |          |                    |                            | 3.0-4.9            |                                  |                          |      | 294  | reference         | -    |   |
|  |  |                                     |                |                    |                    |                |                                    |                    |          |                    |                            | 5.0-7.9            |                                  |                          |      | 179  | 1.03 (0.86- 1.24) | 0.75 | - |
|  |  |                                     |                |                    |                    |                |                                    |                    |          |                    |                            | >-8                |                                  |                          |      | 59   | 1.10 (0.83-1.47)  | 0.51 | - |
|  |  |                                     |                |                    |                    |                |                                    |                    |          | SGA                | 1192                       | < 3.0              |                                  |                          |      | 238  | 1.11 (0.95-1.30)  | 0.18 | - |
|  |  |                                     |                |                    |                    |                |                                    |                    |          |                    |                            | 3.0-4.9            |                                  |                          |      | 419  | reference         | -    |   |
| 5.0-7.9  | 249  | 1.08 (0.92-1.25)                    | 0.36           | -                  |                    |                |                                    |                    |          |                    |                            |                    |                                  |                          |      |      |                   |      |   |
| >-8  | 71   | 1.11 (0.87- 1.43)                   | 0.4            | -                  |                    |                |                                    |                    |          |                    |                            |                    |                                  |                          |      |      |                   |      |   |
| Tamura N, et al.,  | Mediating Factors Between Parental Socioeconomic Status and Small for Gestational Age in Infants: Results from the Hokkaido Study on Environment and Children's Health | 2021 Household income (million yen) | 2002-2013      | 14593              | parents            | single cohort  | SGA                                |                    |          | < 3.0              | 240                        | reference          | crude                            | -                        |      |      |                   |      |   |
|  |  |                                     |                |                    |                    |                |                                    |                    |          | 3.0-4.9            | 431                        | 0.91 (0.78-1.06)   |                                  |                          | 0.25 | -    |                   |      |   |
|  |  |                                     |                |                    |                    |                |                                    |                    |          | 5.0-7.9            | 257                        | 0.96 (0.81-1.14)   |                                  |                          | 0.63 | -    |                   |      |   |
|  |  |                                     |                |                    |                    |                |                                    |                    |          | >-8                | 72                         | 0.93 (0.72-01.19)  |                                  |                          | 0.55 | -    |                   |      |   |

■ケースコントロール研究

| Reference  |   |      | Study subjects |                 |            |                 |                    | Category      | Number among cases | Relative risk (95%CI or p) | P for trend | Confounding variables  | Magnitude of association |                      |      |  |
|--|---|------|----------------|-----------------|------------|-----------------|--------------------|---------------|--------------------|----------------------------|-------------|--|--------------------------|----------------------|------|--|
| Author   | Title   | Year | Study period   | Type and source | Definition | Number of cases | Number of controls |               |                    |                            |             |  |                          |                      |      |  |
| Hayashi I, Takakura K, Yamaguchi K, Sumitomo M, Suzuki M, Sumitomo A, Minato S, Nose Y, Nagai N, Sakane N. | Association between socioeconomic status and small-for-gestational-age in Japan: A single center retrospective cohort study | 2020 | 2007-2011      | single cohort   | Low SES    | 197             | 1773               | PTB <37 weeks | 12                 | 0.85 (0.44- 1.64) OR       | 0.63        | baseline maternal age, parity, BMI, smoking, gestational weight. | -                        |                      |      |  |
|  |   |      |                |                 |            |                 |                    |               | 125                |                            |             |  |                          |                      |      |  |
|  |   |      |                |                 |            |                 |                    |               | SGA                | 26                         |             |  |                          | 1.92 (1.17- 3.17) OR | 0.01 | ↑↑<br>baseline maternal age, parity, BMI, smoking, gestational weight. |
|  |   |      |                |                 |            |                 |                    |               |                    |                            |             |  |                          | 138                  |      |  |

■メタ解析、系統的レビュー

| Reference        |  |      | Include study |              |      |              |                | Design | Category    | Relative risk (95% CI or p) | Weight           | Magnitude of association |
|------------------|--|------|---------------|--------------|------|--------------|----------------|--------|-------------|-----------------------------|------------------|--------------------------|
| Author           | Title  | Year | Ref.No.       | First author | Year | Study period | Study location |        |             |                             |                  |                          |
| Amjad S, et al., | Social determinants of health and adverse maternal and birth outcomes in adolescent pregnancies: A systematic review and meta- | 2019 | 8302          | Coley        | 2016 |              | United States  | LBW    | sample size | 55237                       | 1.55 (1.25-1.93) | ↑↑                       |
|                  |  |      | 659           | Restrepo     | 2005 |              | Colombia       |        |             |                             |                  |                          |
|                  |  |      | 28178         | Laureano     | 2016 |              | Mexico         |        |             |                             |                  |                          |

analysis

48 Nebot  
18050 Partington

1989  
2009

Spain  
United States

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(教育歴: Education)

■コホート研究(コホートのプール解析含む)

| Reference  |   |                  | Study subjects |                    |                    |                |                                    | Category   | Number among cases   | Relative risk (95%CI or p) | P for trend | Confounding variables considered | <b>Magnitude of association</b> |                    |                   |               |
|--|---|------------------|----------------|--------------------|--------------------|----------------|------------------------------------|--|--|----------------------------|-------------|----------------------------------|---------------------------------|--------------------|-------------------|---------------|
| Author   | Title   | Year             | Study period   | Number of subjects | Source of subjects | Event followed | Number of incident cases or deaths |  |  |                            |             |                                  |                                 | Participant's race |                   |               |
| Tamura N, Hanaoka T, Ito K, Araki A, Miyashita C, Ito S, Minakami H, Cho K, Endo T, Sengoku K, Ogasawara K, Kishi R. | Different Risk Factors for Very Low Birth Weight, Term-Small-for-Gestational-Age, or Preterm Birth in Japan | 2018             | 2002-2013      | 18,059             | single cohort      | VLBW( <1500g   | 74 Japanese                        | <- 9   | 4  | 1.12 (0.39-3.22)           | 0.84        | crude                            | -                               |                    |                   |               |
|  |   |                  |                |                    |                    |                |                                    | 10-12  | 30   | reference                  |             |                                  |                                 |                    |                   |               |
|  |   |                  |                |                    |                    |                |                                    | 13-15  | 23   | 0.81 (0.47-1.40)           |             |                                  |                                 |                    |                   |               |
|  |   |                  |                |                    |                    |                |                                    | >-16   | 10   | 1.29 (0.62 2.65)           |             |                                  |                                 |                    |                   |               |
|  |   |                  |                |                    |                    |                |                                    | PTB  | 805  | <- 9                       |             |                                  |                                 | 43                 | 1.20 (0.88- 1.65) | 0.26          |
|  |   |                  |                |                    |                    |                |                                    |  |  | 10-12                      |             |                                  |                                 | 307                | reference         |               |
|  |   |                  |                |                    |                    |                |                                    |  |  | 13-15                      |             |                                  |                                 | 329                | 1.12 (0.96- 1.31) |               |
|  |   |                  |                |                    |                    |                |                                    | SGA  | 1192   | >-16                       |             |                                  |                                 | 79                 | 1.00 (0.78- 1.27) | 0.98          |
|  |   |                  |                |                    |                    |                |                                    |  |  | <- 9                       |             |                                  |                                 | 74                 | 1.27 (1.00- 1.61) |               |
|  |   |                  |                |                    |                    |                |                                    |  |  | 10-12                      |             |                                  |                                 | 486                | reference         |               |
|  |   |                  |                |                    |                    |                |                                    |  |  | 13-15                      |             |                                  |                                 | 475                | 1.04 (0.92- 1.18) |               |
|  |   |                  |                |                    |                    |                |                                    | Tamura N, Hanaoka T, Ito K, Araki A, Miyashita C, Ito S, Kobayashi S, Ito Y, Minakami H, Cho K, Endo T, Baba T, Sengoku K, Miyamoto T, Ogasawara K, Kishi R. | Mediating Factors Between Parental Socioeconomic Status and Small for Gestational Age in Infants: Results from the Hokkaido Study on Environment and Children's Health | 2021                       |             |                                  |                                 | 2002-2013          | 14593             | single cohort |
| 10-12  | 429   | 0.89 (0.68-1.17) |                |                    |                    |                |                                    |  |  |                            |             |                                  |                                 |                    |                   |               |
| 13-15  | 429   | 0.92 (0.71-1.21) |                |                    |                    |                |                                    |  |  |                            |             |                                  |                                 |                    |                   |               |
| >-16   | 87  | 0.69 (0.50-0.96) |                |                    |                    |                |                                    |  |  |                            |             |                                  |                                 |                    |                   |               |
| SGA  |   | <- 9             | 76             | reference          | 0.03               |                |                                    |  |  |                            |             |                                  |                                 |                    |                   |               |
|  |   | 10-12            | 426            | 1.02 (0.81-1.3)    |                    |                |                                    |  |  |                            |             |                                  |                                 |                    |                   |               |
|  |   | 13-15            | 258            | 1.09 (0.85-1.4)    |                    |                |                                    |  |  |                            |             |                                  |                                 |                    |                   |               |
|  |   | >-16             | 240            | 0.88 (0.69-1.13)   |                    |                |                                    |  |  |                            |             |                                  |                                 |                    |                   |               |

(職業: Occupation)

■コホート研究(コホートのプール解析含む)

| Reference            |   |        | Study subjects |                    |   |                |                                    |                    | Category             | Number among cases | Relative risk (95%CI or p) | P for trend | Confounding variables considered | Magnitude of association |
|----------------------|---|--------|----------------|--------------------|---|----------------|------------------------------------|--------------------|----------------------|--------------------|----------------------------|-------------|----------------------------------|--------------------------|
| Author               | Title   | Year   | Study period   | Number of subjects | Source of subjects  | Event followed | Number of incident cases or deaths | Participant's race |                      |                    |                            |             |                                  |                          |
| Okui T, Nakashima N. | Analysis of Differences in Preterm Birth Rates According to Household Occupation in Japan From 2007 to 2019 | 2022   | 2007-2019      | 12,282,797 births  | the Ministry of Health, Labour and Welfare by requesting a made-to-order aggregation per Japan's Statistics Act | PTB            | 74 Japanese                        | Unemployed         | 1.000 (reference)    |                    |                            |             |                                  |                          |
|                      |   |        |                |                    |   |                |                                    | Farmer             | 0.721 (0.702, 0.740) | <0.001             |                            | ↓           |                                  |                          |
|                      |   |        |                |                    |   |                |                                    | Self-employed      | 0.708 (0.695, 0.721) | <0.001             |                            | ↓           |                                  |                          |
|                      |   |        |                |                    |   |                |                                    | Full-time worker 1 | 0.711 (0.699, 0.723) | <0.001             |                            | ↓           |                                  |                          |
|                      |   |        |                |                    |   |                |                                    | Full-time worker 2 | 0.671 (0.660, 0.682) | <0.001             |                            | ↓           |                                  |                          |
| Other worker         | 0.716 (0.703, 0.730)  | <0.001 |                | ↓                  |   |                |                                    |                    |                      |                    |                            |             |                                  |                          |

1 Full-time worker at a workplace with fewer than 100 employees.  
2 Full-time worker at a workplace with 100 or more employees, civil servant, or board member.

系統的レビュー

| Reference  |  |      | Include study |              |      |              |                | Design | Category | Relative risk (95% CI or p) | Weight | Magnitude of association |
|--|--|------|---------------|--------------|------|--------------|----------------|--------|----------|-----------------------------|--------|--------------------------|
| Author   | Title  | Year | Ref No.       | First author | Year | Study period | Study location |        |          |                             |        |                          |
| Amjad S, MacDonald I, Chambers T, Osornio-Vargas A, Chandra S, Voaklander D, | Social determinants of health and adverse maternal and birth outcomes in adolescent pregnancies: A systematic review and meta-analysis | 2019 | 384           | Rickert      | 1998 |              | United States  |        | SGA      | 4.60 (1.1-19.3)             |        | ↑↑↑                      |