

LDA2Net: Digging under the surface of COVID-19 topics in literature

Topic 38 companion sheet

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This file contains the following supplementary information for Topic 38 of the manuscript “*LDA2Net*: Digging under the surface of COVID-19 topics in scientific literature”:

- Human label and automatic n-gram label proposals (Table 1)
- Summary measures (Table 2)
- Network of top 25 bigrams (Figure 1)
- Wordclouds of top 25 words by node relevance measure (Figure 2)
- Wordclouds of top 25 bigrams by edge relevance measure (Figure 3)
- Filtered (0.99 percentile) topic network (Figure 4)

Table 1: Human and automatic label proposals. Automatic label candidate for largest word community of the topic. In parenthesis: absolute frequency of the walk out of a sample of size 1000.

Human label	2-gram label	3-gram label	4-gram label
effects of vitamin somministration	levels->supplementation (7.3%)	levels->supplementation->significantly (4%)	levels->supplementation->significantly->reduced (1.8%)

Here follows the set of topic-specific measures that have been used to classify the topic and to analyse its structural properties (see manuscript for details):

Table 2: Summary measures

	JSD	Mean propensity	Variance propensity	Modularity	Barrat Clustering Coeff.
value	0.550697	0.007140	0.000314	0.156132	0.556595
rank	17	10	63	96	35

Based on the aforementioned measures, Topic 38 has been classified as a CROSS-CUTTING topic.

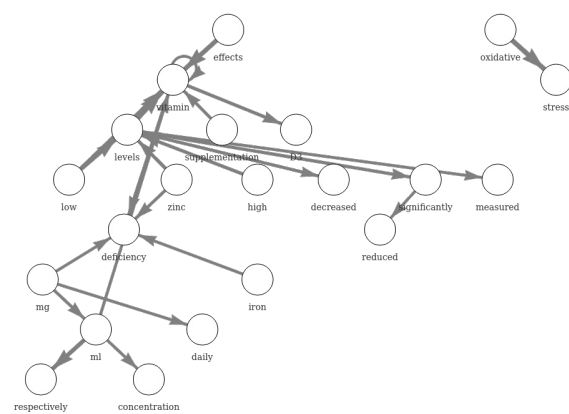


Figure 1: Network of top 25 bigrams (i.e., edges) by weight.

A word cloud containing terms such as 'normal', 'reduced thyroid', 'supplementation', 'stress', 'zinc', 'concentration', 'antioxidant', 'levels', 'mg', 'ml', 'vitamin', 'deficiency', 'administration', 'decreased', 'effects', 'mg', 'kgdl', 'oxidative increase', 'doses', 'treatment', 'respectively', and 'ng'. The words are arranged in a circular pattern with varying font sizes.

A word cloud of keywords related to the study. The most prominent words are 'vitamin', 'levels', 'supplementation', 'effects', 'milk', 'iron', 'low', 'mg', 'antioxidant', 'concentration', 'oxidative', 'decreased', 'significantly', 'high', 'significant', 'lower', 'deficiency', 'reduced', 'zinc', 'respectively', 'treatment', 'level', 'normal', and 'increase'. The words are arranged in a circular pattern, with 'vitamin' and 'levels' being the largest and most central.

A word cloud of terms related to vitamin D3 deficiency and oxidative stress. The words are arranged in a circular pattern, with 'vitamin' and 'levels' being the most prominent. Other visible words include 'deficiency', 'stress', 'concentration', 'increased', 'observed', 'significantly', 'antioxidant', 'measured', 'treatment', 'daily', 'zinc', 'reduced', 'decreased', 'normal', 'low', 'respectively', 'oxidative', 'supplementation', and 'lower'.

[illegible]

A word cloud of terms related to the study. The most prominent word is 'treatment', which is written vertically in the center. Other words include 'vitamin', 'effects', 'stress', 'levels', 'lower', 'deficiency', 'antioxidant', 'evaluate', 'observed', 'increase', 'decrease', 'respectively', 'concentration', 'significantly', 'measured', 'significant', 'mg', 'found', 'normal', 'supplementation', 'oxidative', 'studied', 'decreased', and 'normal'. The words are arranged in a circular pattern around the central 'treatment' word.

A word cloud of terms related to the study. The most prominent words are 'vitamin', 'levels', 'deficiency', 'treatment', 'supplementation', 'oxidative', 'measured', 'increased', 'stress', 'level', 'D3', 'effects', 'antioxidant', 'results', 'low', 'found', 'concentration', 'lower', 'decreased', 'reduced', 'significant', 'observed', 'high', 'respectively', and 'supplement'. The words are arranged in a circular pattern, with 'vitamin' and 'levels' being the largest and most central.

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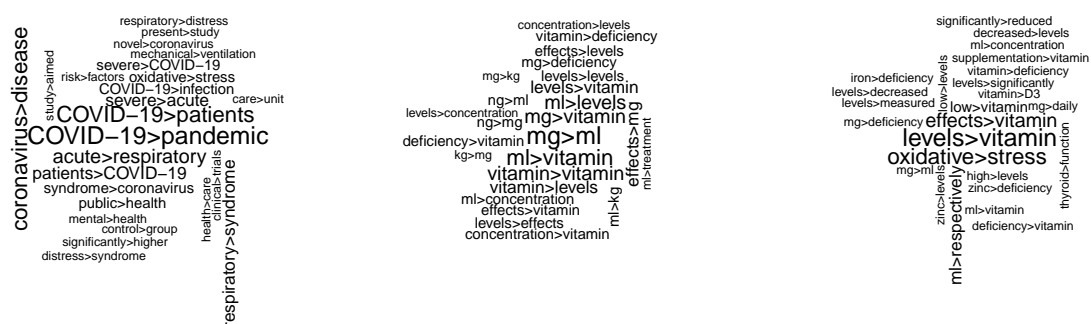


Figure 3: Top 25 bigrams (i.e., edges) by measure.

