

# Comparing topics of interest in forum discussions, Wiki and research articles in search of new indicators of the public's interest in Diabetes

Fereshteh Didegah<sup>1&\*</sup>; Zahra Ghaseminik<sup>2</sup>; Juan Pablo Alperin<sup>1</sup>

<sup>1</sup> *Simon Fraser University, Scholarly Communications Lab, Vancouver BC, Canada*

<sup>2</sup> *Scientometrics & Technological Investigation Research Group, ISC, Shiraz, Iran*

\* [fdidegah@sfu.ca](mailto:fdidegah@sfu.ca)



# Diabetes: Key facts

- Diabetes has grown in prevalence among adults aged 18 or older from 4.7% in 1980 to 8.5% in 2014.
- In 2012, 3.7 million people died for diabetes and high blood glucose (WHO, 2017).



# Our motivation

diabetic  connect

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## Popular Now



### "The Origins of Metformin"



Started by Luis65

9 Comments

1924 more discussions about [Oral Medications](#)

### Irma Preps for Diabetics



Started by Gabby PA

7 Comments

5184 more discussions about [Newly Diagnosed](#)

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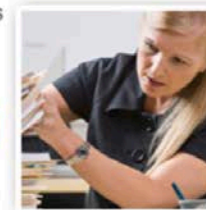
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## Did your job give you diabetes?

Here's what happens on the job that may raise the risk.

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## My Diabetic Connect



Vegetables on Half of Your Plate? Yes,



### Peach Pie Breakfast Bars

Tags: [breakfast](#) [dairy free](#)

## Community Wellness Update



Chenay recorded her HbA1c.

**25.0**

HbA1c



Daqwet recorded her HbA1c.

**12.6**

HbA1c



# We aim to:

- Uncover the areas of interest and needs of the general public related to diabetes, as seen in online platforms, and their relationship to the research on those topics.
- The extent to which discussions on public online platforms align with academic research in diabetes
- The lag/lead between the topics discussed in online platforms and topics researched by scholars.



# Data

- ***DiabeticConnect* forum discussions**

22,845 discussions and their tags from 2008-2016

- **Wikipedia articles**

418 articles and their edits (200 articles were removed since they were about celebrities who died for/suffered from diabetes) (2008-2016)

- **Scopus articles**

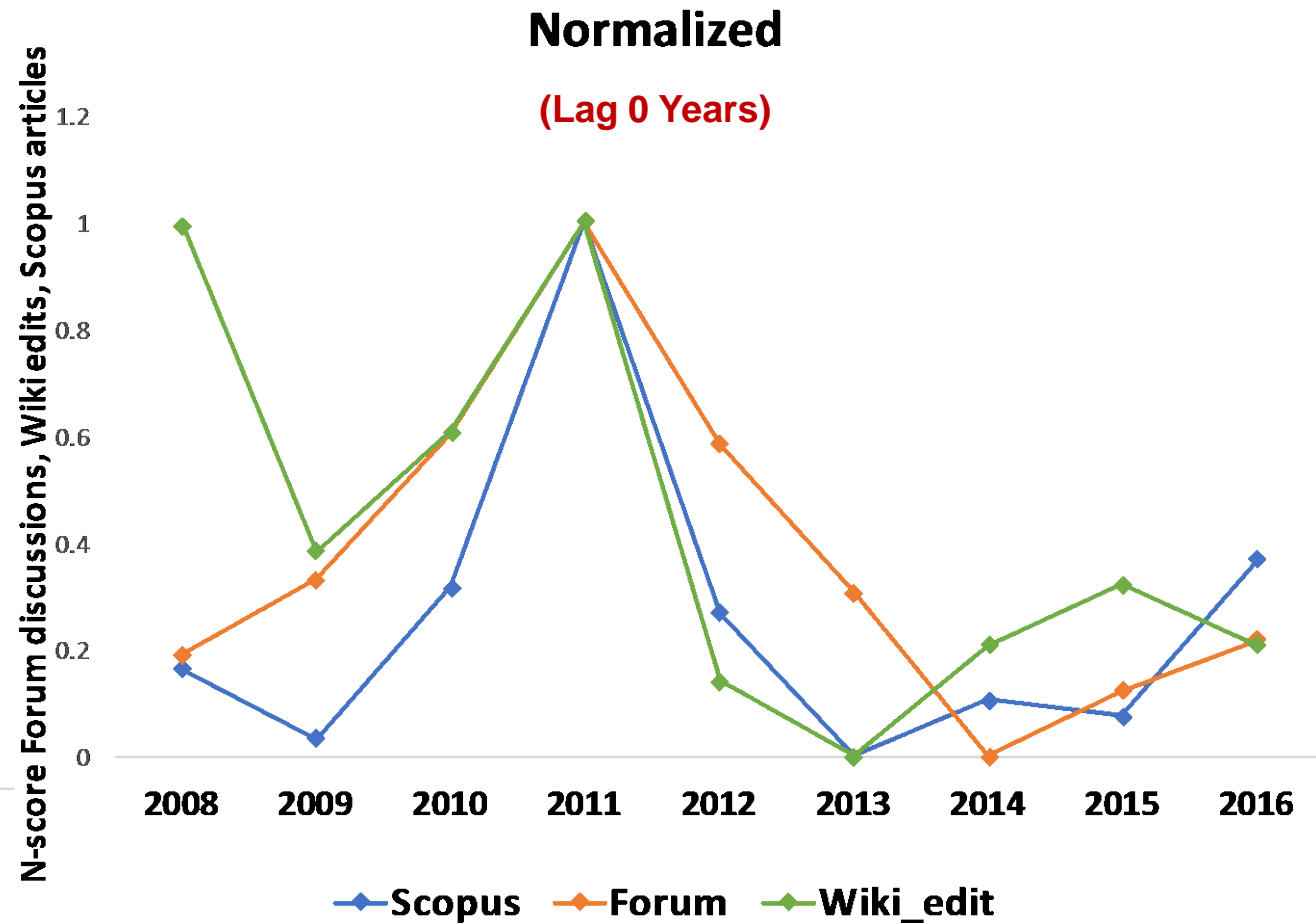
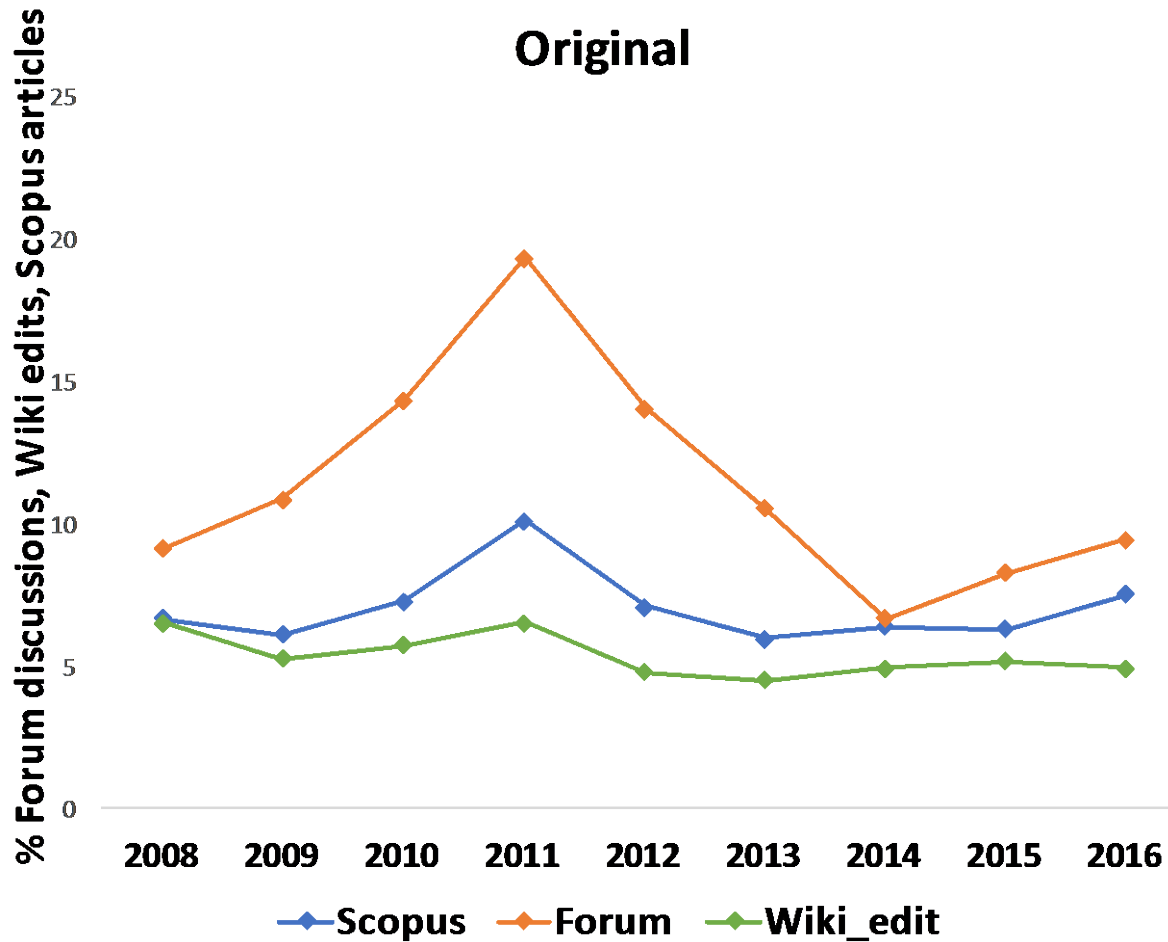
108,180 articles (2008-2016)



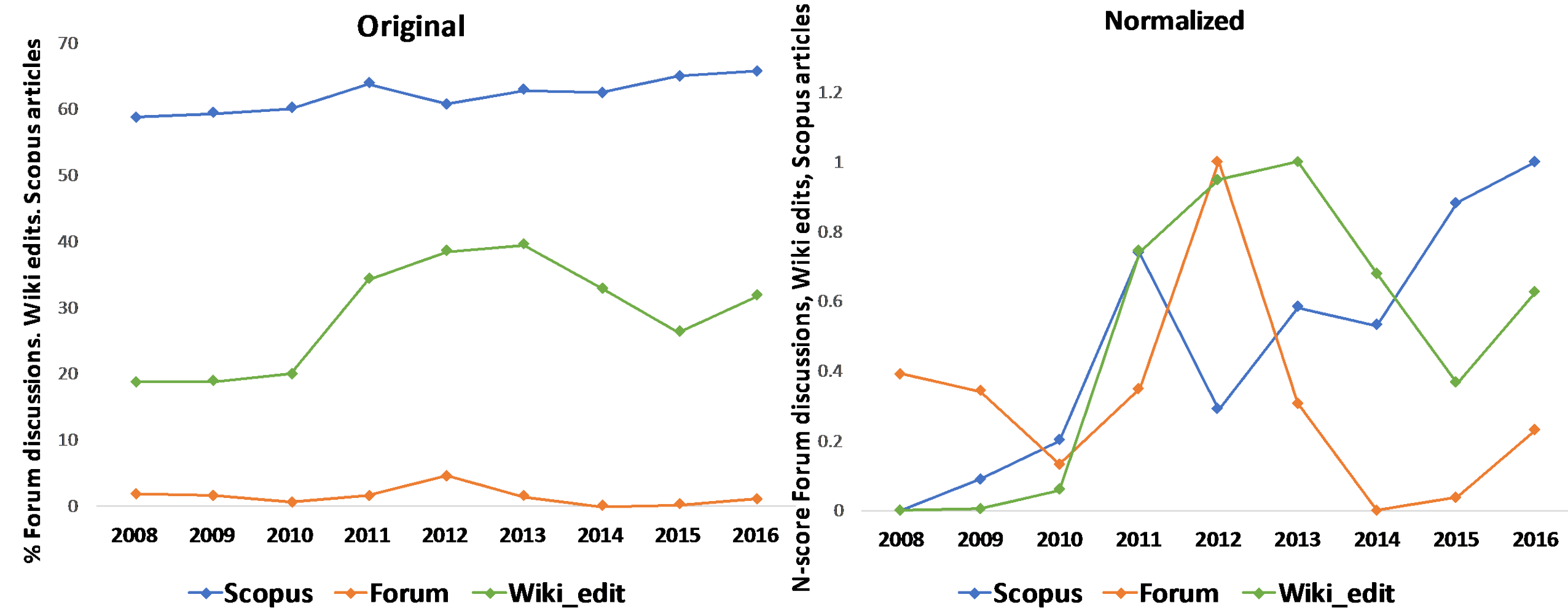
# Methods

- *Labeled Latent Dirichlet Allocation (LLDA)*: The tags on the forum were used as the initial labels because we are interested in public language use. Then we used the model developed with the forum as a training set to classify Wiki and Scopus articles.
- *Time series* (Original – Normalized – Shifted)
- 20 highly discussed topics on the forum are compared across the three platforms.

# TOPIC: Neuropathy



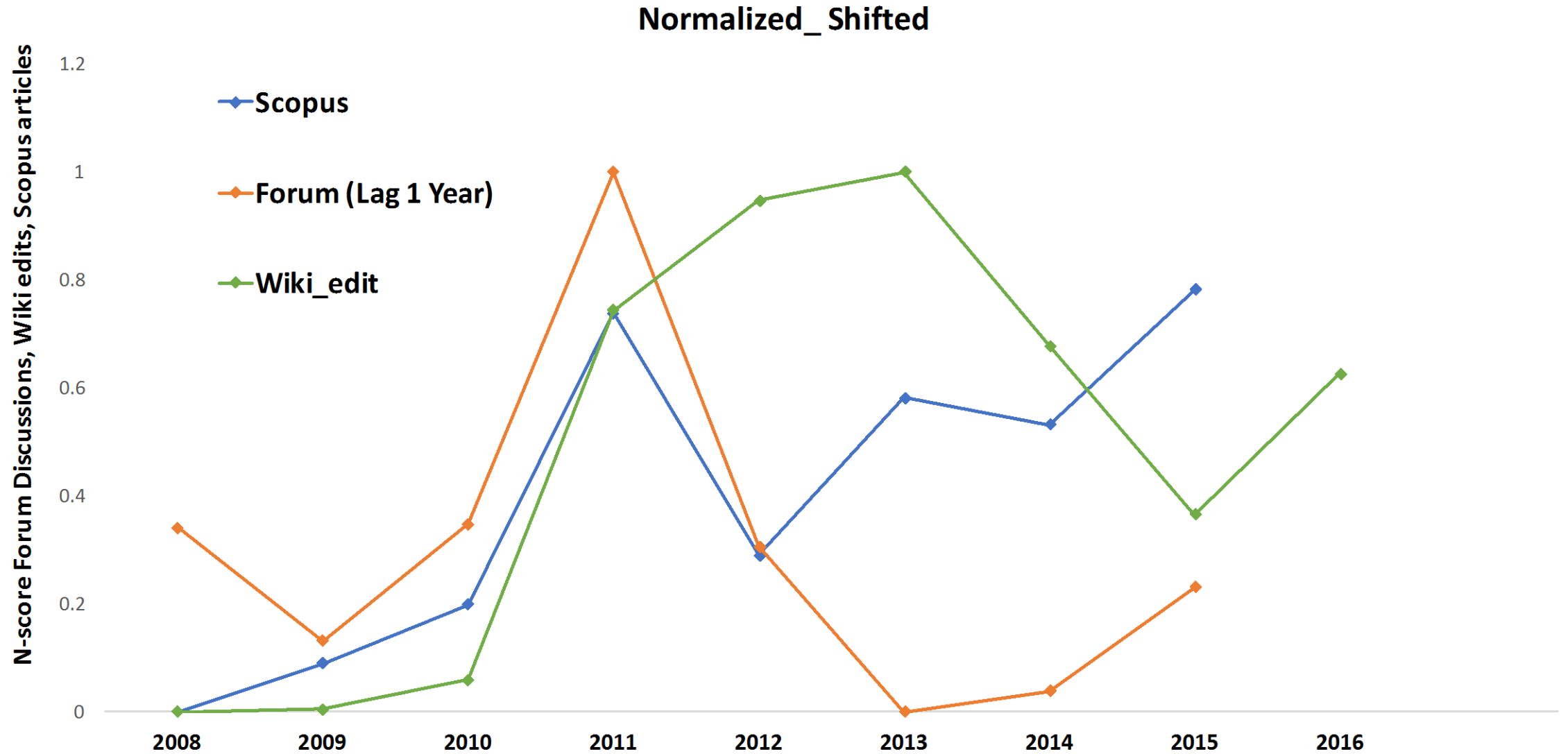
# TOPIC: A1C Test





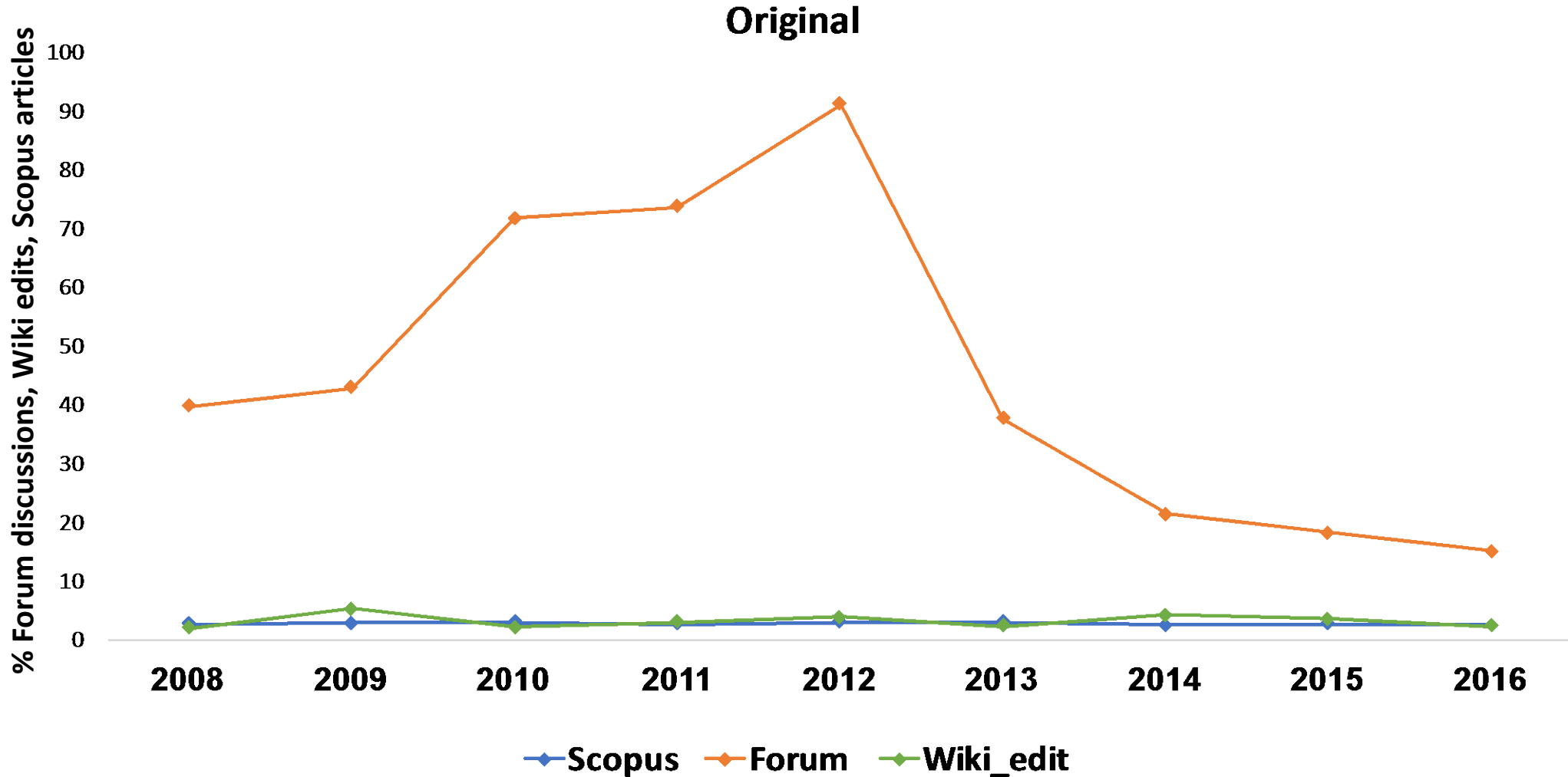
# TOPIC: A1C Test

Forum is lagging research and Wiki 1 year



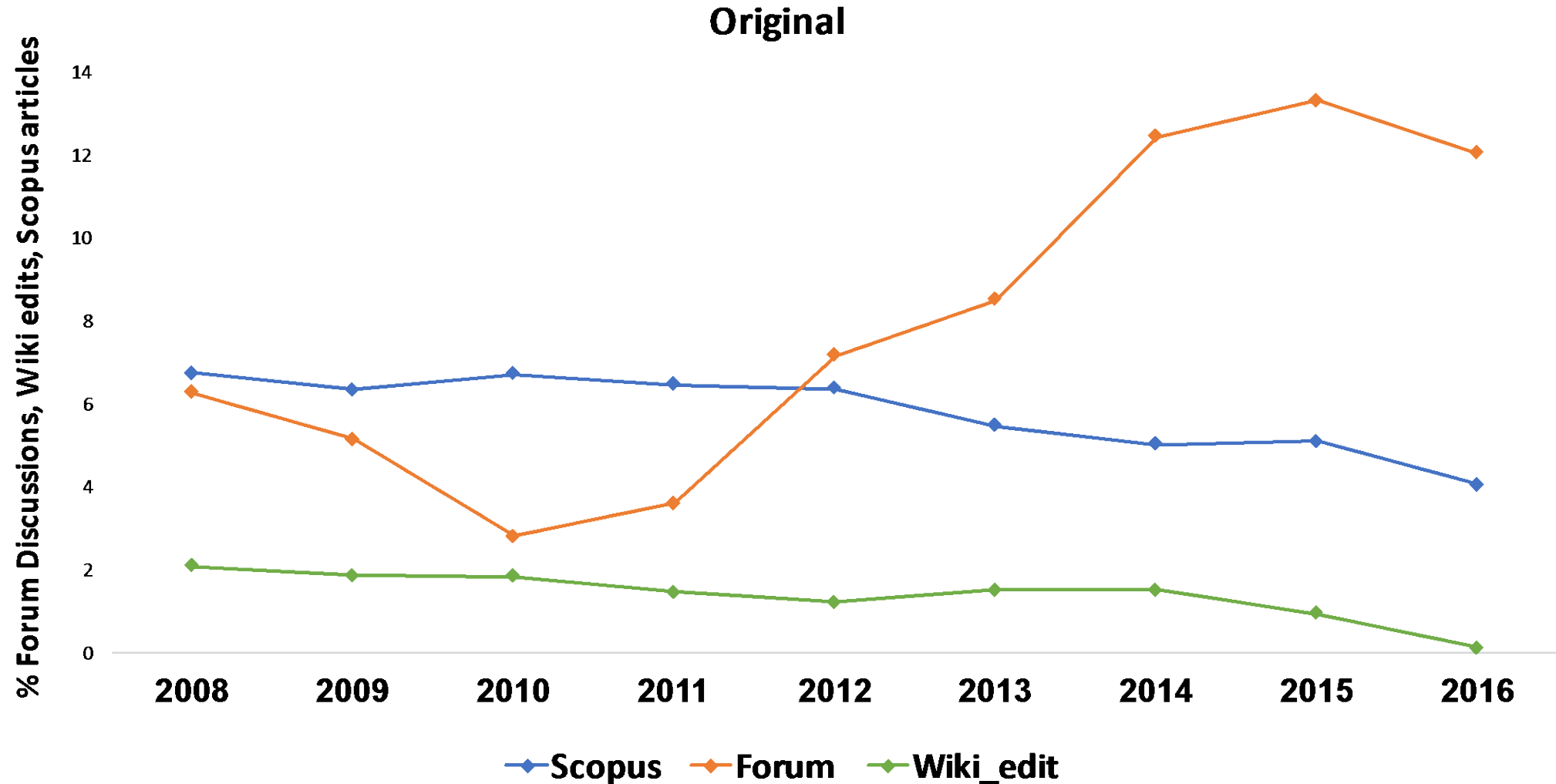
# TOPIC: Emotional support/Motivation

It is highly discussed on the Forum.



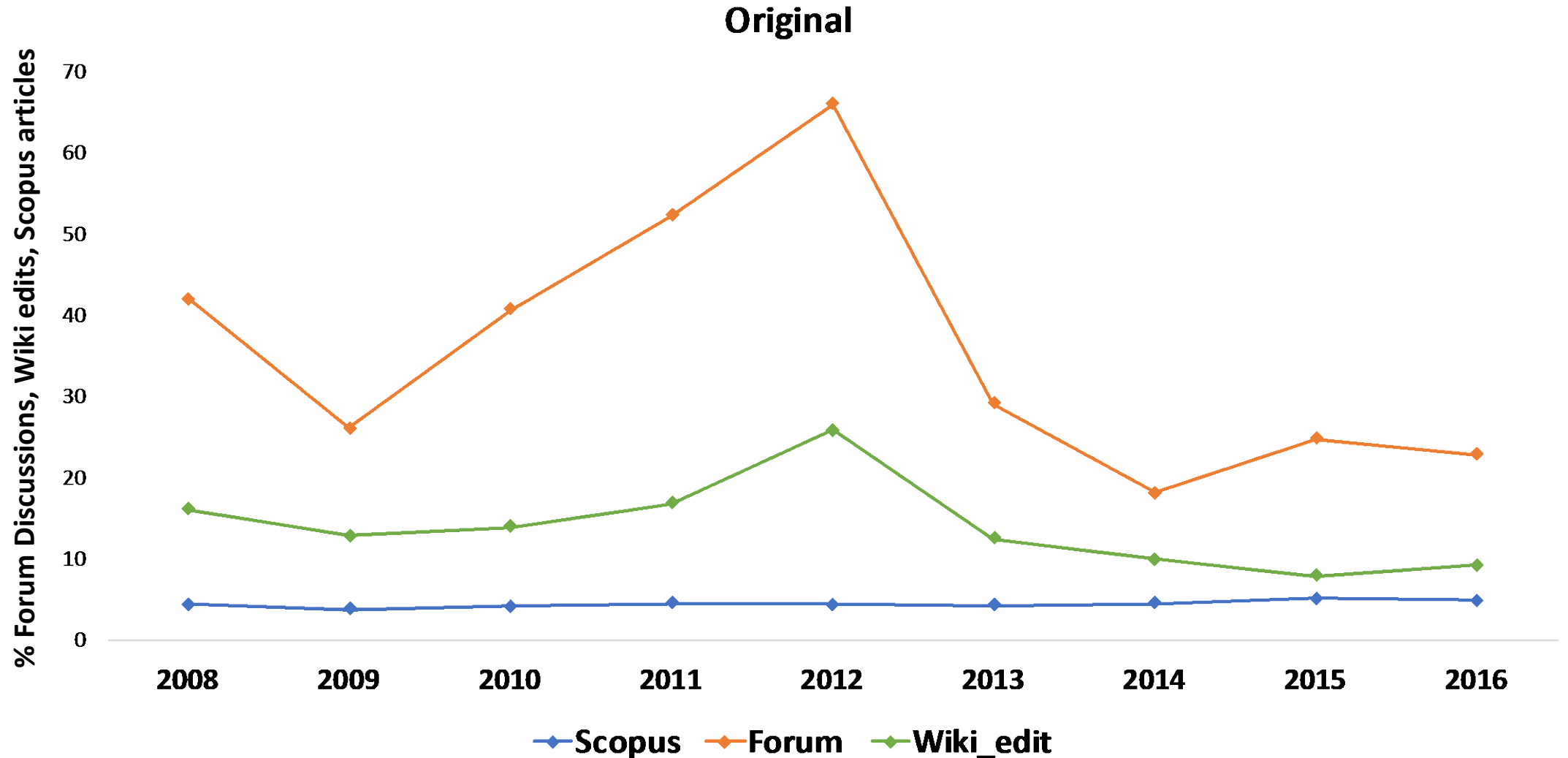
# TOPIC: Insulin

It shows an increasing trend on the Forum.



# TOPIC: Diabetes Diet

It is not well researched in Scopus while highly discussed on online platforms.





# Conclusion

- Not all the highly discussed topics on the forum are of interest to researchers and Wiki authors, and vice versa.
- While a high percentage of articles in Scopus are about diabetes testing (especially a1c test), control or treatments, a large number of forum posts discussed emotional support and motivation for patients and diabetes diet and nutrition.
- New sources like public discussion forums can lead to a greater understanding of the connection between researcher's topic of interest and the public's interest.



# Thanks for Your Attention!

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