

What does R do? (continued from previous slide)

Statistical methods

R has a large library of statistical methods, and many more are being developed. Some of the most common statistical methods include:

1.1 Basic data structures in the R statistical framework

R has primitive data structures. By "primitive" we mean that they are built-in and cannot be changed by the user. By "basic", we mean that they are the building blocks for more complex data structures. Most other data structures are built on top of these basic structures. For example, lists are built on top of vectors, and matrices are built on top of vectors and lists. Data frames are built on top of lists.

It is important to be familiar with these data structures because they form the basis for all R programs. We will discuss them in detail in the following sections.

The primary data structure in R is the **vector**. A vector is a one-dimensional array of elements of the same type. For example, `c(1, 2, 3, 4, 5)` creates a vector of length 5 containing the values 1, 2, 3, 4, and 5. Vectors can be created from other data structures, such as lists and data frames, and vice versa. For example, if you have a data frame with 5 columns, you can extract a single column as a vector.

There are several other types of data structures. If you want to learn more about them, go to the [R documentation](#). For now, the most likely to encounter the most often in this book are the **list** and the **data frame**.

1.1.1 Lists and data frames

A **list** is a collection of vectors or other objects. It can contain vectors of different lengths, vectors of different types, and even other lists. For example, the following is a list of length 3, with three elements:

`list(a = 1, b = 2, c = 3)`

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1.3.3.3. *Problemas de la Producción*

1.3.3.3.1. *Problema de la Producción*

Los problemas de producción surgen en el momento de la ejecución de la actividad productiva. Se consideran como tales los conflictos que surgen entre las necesidades y deseos de los trabajadores y las realidades que se presentan en la ejecución de la actividad productiva. Los principales tipos de problemas de producción son:

- Problemas de trabajo: surgen en el momento de la ejecución de la actividad productiva y tienen que ver con la realización de las tareas y la ejecución de las órdenes de trabajo.
- Problemas de relaciones: surgen en el momento de la ejecución de la actividad productiva y tienen que ver con las relaciones entre los trabajadores y la dirección.

1.3.3.3.2. *Problemas de Organización*

Los problemas de organización surgen en el momento de la ejecución de la actividad productiva y tienen que ver con la realización de las tareas y la ejecución de las órdenes de trabajo. Los principales tipos de problemas de organización son:

1.3.3.3.3. *Problemas que impiden la realización*

Los problemas que impiden la realización de la actividad productiva surgen en el momento de la ejecución de la actividad productiva y tienen que ver con la realización de las tareas y la ejecución de las órdenes de trabajo. Los principales tipos de problemas que impiden la realización de la actividad productiva son:

1.3.3.4. *Tipos de Problemas de Producción*

Los problemas de tipo de producción surgen en el momento de la ejecución de la actividad productiva y tienen que ver con la realización de las tareas y la ejecución de las órdenes de trabajo. Los principales tipos de problemas de tipo de producción son:

- Problemas de tipo de producción: surgen en el momento de la ejecución de la actividad productiva y tienen que ver con la realización de las tareas y la ejecución de las órdenes de trabajo.

1.3.3.4.1. *Problemas de tipo de producción*

- Problemas de tipo de producción: surgen en el momento de la ejecución de la actividad productiva y tienen que ver con la realización de las tareas y la ejecución de las órdenes de trabajo.

RESUMÉ

Le présent document présente :

- les résultats de l'analyse des données réalisée par le Bureau d'évaluation et de surveillance du Québec (BESQ) dans le cadre de la mise en œuvre du programme de lutte contre les maladies de la peau et des muqueuses (MLP) au Québec;
- les conclusions tirées de cette analyse et les recommandations émises par le BESQ au sujet de l'application de ce programme au Québec.

Il présente également une brève introduction à l'analyse des données réalisée par le BESQ et à l'analyse des résultats de cette analyse, suivi d'une section intitulée « Conclusion », qui présente les conclusions tirées de l'analyse des données et les recommandations émises par le BESQ au sujet de l'application de ce programme au Québec. Ces deux sections sont suivies d'une section intitulée « Annexes », qui présente les annexes et les références bibliographiques.

1.1.1. Introduction générale au rapport et à son contenu

1.1.1.1. Introduction générale

Le présent document présente les résultats de l'analyse des données réalisée par le BESQ dans le cadre de la mise en œuvre du programme de lutte contre les maladies de la peau et des muqueuses (MLP) au Québec. Il offre une analyse détaillée des résultats de l'application de ce programme au Québec et propose des recommandations pour améliorer l'application de ce programme au Québec.

Le présent document est destiné à fournir aux autorités de santé publique, aux organismes de recherche et à toute autre personne intéressée par l'application de ce programme au Québec une analyse détaillée des résultats de l'application de ce programme au Québec et des recommandations pour améliorer l'application de ce programme au Québec.

1.1.1.2. Structure du rapport

Le présent document est structuré en plusieurs parties. La première partie, intitulée « Introduction générale », présente l'objectif et la méthodologie de l'analyse des données réalisée par le BESQ dans le cadre de la mise en œuvre du programme de lutte contre les malades de la peau et des muqueuses (MLP) au Québec. La deuxième partie, intitulée « Conclusion », présente les conclusions tirées de l'analyse des données et les recommandations émises par le BESQ au sujet de l'application de ce programme au Québec. La troisième partie, intitulée « Annexes », présente les annexes et les références bibliographiques.

1.1.1.3. Objectifs de l'analyse des données

Le présent document a pour objectif de dresser un portrait précis et détaillé de l'application de ce programme de lutte contre les malades de la peau et des muqueuses (MLP) au Québec, en analysant les résultats de l'application de ce programme au Québec et en proposant des recommandations pour améliorer l'application de ce programme au Québec.

2.2 Planning and delivery of education

Planning and delivery of education are two main areas of focus in the framework. These are broken down into four sub-categories. The following table shows the different areas of focus and the relevant ETSB criteria, accompanied by links to the full document.

2.2.1 Planning and delivery of education This area of focus will be assessed by referring to the following ETSB criteria. It includes planning, design, implementation, delivery, assessment and evaluation.

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2.2.2 Assessment of learners per criterion

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2.2.2.3 Assessment of learners per criterion

QUESTION

What is the difference between:

a) **absolute** and **relative** risk?

b) **odds ratio** and **hazard ratio**?

c) **mean difference**, **standardized mean difference** and **mean difference expressed in standard deviation units**?

ANSWER

a) **Absolute risk** and **relative risk**:

i) **Absolute risk** is the chance of an event occurring.

ii) **Relative risk** is the chance of an event occurring compared to another event.

iii) **Hazard ratio** is the ratio of absolute risk to relative risk.

b) **Odds ratio** and **hazard ratio**:

i) **Odds ratio** is the odds of an event occurring compared to the odds of it not occurring.

ii) **Hazard ratio** is the hazard of an event occurring compared to the hazard of it not occurring.

c) **Mean difference**, **standardized mean difference** and **mean difference expressed in standard deviation units**:

i) **Mean difference** is the difference in mean values of two groups.

ii) **Standardized mean difference** is the mean difference divided by the standard deviation of the two groups.

iii) **Mean difference expressed in standard deviation units** is the mean difference divided by the standard deviation of the two groups.

d) **Relative risk**, **odds ratio** and **hazard ratio**:

i) **Relative risk** is the ratio of absolute risk to relative risk.

ii) **Odds ratio** is the odds of an event occurring compared to the odds of it not occurring.

iii) **Hazard ratio** is the hazard of an event occurring compared to the hazard of it not occurring.

e) **Mean difference**, **standardized mean difference** and **mean difference expressed in standard deviation units**:

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Implementation

Implementation of the system is divided into three phases:

1. System planning.

2. System design.

3. System implementation. The system implementation phase consists of two main parts:

1. System configuration. This phase involves setting up the system's initial parameters and defining the basic structure of the system's architecture.

2. System deployment. This phase involves installing the system on the target environment and testing its performance to ensure that it meets the specified requirements. This phase also includes the configuration of system components, such as databases, servers, and network infrastructure.

The system configuration phase is critical to the success of the system. It requires careful planning and attention to detail to ensure that the system is configured correctly and efficiently. The deployment phase is also critical to the success of the system, as it involves the installation of the system on the target environment and the configuration of system components.

III. Deployment

The deployment phase involves the installation of the system on the target environment and the configuration of system components to ensure that the system is functioning correctly. This phase also involves the configuration of system components, such as databases, servers, and network infrastructure. The deployment phase is critical to the success of the system, as it involves the installation of the system on the target environment and the configuration of system components.

IV. Maintenance and Support

Maintenance and support of the system involve the process of identifying and resolving system issues and providing system updates. The maintenance and support phase is critical to the success of the system, as it involves the identification and resolution of system issues and the provision of system updates.

The maintenance and support of the system involves regular monitoring and analysis of system data, as well as the application of system updates and patches. The maintenance and support phase is critical to the success of the system, as it involves the identification and resolution of system issues and the provision of system updates.

V. Summary

The system configuration phase is critical to the success of the system. It requires careful planning and attention to detail to ensure that the system is configured correctly and efficiently. The deployment phase is also critical to the success of the system, as it involves the installation of the system on the target environment and the configuration of system components.

VI. Deployment and Configuration Overview

Response	2019	2020
Not applicable	100.0%	100.0%
Yes, I am a member of the European Parliament	100.0%	100.0%
Yes, I am a member of the European Parliament and I am from France	100.0%	100.0%

B. About the Response to the Survey

For each statement, following the survey, participants had the opportunity to provide an additional, more detailed response within the same survey. The responses to the statements below are presented here, as requested by the survey participants. These responses were not included in the main analysis due to the small number of respondents.

The last two "Overall" questions reflect the French responses and 2020 European responses.

Response	2019	2020
Belief in Free Press	100.0%	100.0%
Belief in Fair Trial	100.0%	100.0%
Belief in Freedom of Speech	100.0%	100.0%
Belief in Freedom of Assembly	100.0%	100.0%
Belief in Freedom of Association	100.0%	100.0%
Belief in Freedom of Religion	100.0%	100.0%
Belief in Freedom of Expression	100.0%	100.0%
Belief in Freedom of Information	100.0%	100.0%
Belief in Freedom of Movement	100.0%	100.0%

C. Beliefs in Freedoms of Expression

Independent from the other statements in Q1, respondents also had the opportunity to respond to the following:

Response	2019	2020
Belief in Right to Privacy	100.0%	100.0%
Belief in Right to Privacy of Children	100.0%	100.0%

Q2 also asked respondents to rank their level of agreement with the following statement:

"I believe that it is important to have a free press, even if it means that some people will disagree with what it says."

the party's political platform. This process can be thought of as a process of socialization, in which the party's ideas and values are passed on to members.

3.3. Propaganda: Party vs. People

The most important role of propaganda is to recruit people to support their party and to maintain their support. Propaganda can also be used to differentiate one's own party from other parties or to attack other parties.

Propaganda can be used to recruit supporters into the party and to maintain their support by attacking other parties, by attacking their policies and programs, or by attacking their leaders.

Propaganda can be used to maintain the support of existing supporters by attacking other parties, by attacking their policies and programs, or by attacking their leaders.

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• **Business**
• **Marketing**
• **Finance**

• **Business** is a discipline that studies how to produce goods and services and sell them profitably.

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Business	Marketing
Business marketing	Marketing
Business of Marketing	Marketing
Marketing	Marketing
Marketing	Marketing
Change the Management	Marketing

The central requirement of business marketing is to produce goods and services that satisfy customer needs. It is also true that marketing is a discipline that studies how to produce goods and services and sell them profitably.

II. Business & Business per Page

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II. Business marketing is a discipline

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Chemical Properties

The most common reaction of aldehydes and ketones is addition polymerization. Many aldehydes and ketones are monofunctional, but polyaldehydes and polyketones can be formed by addition of aldehydes or ketones to themselves or to themselves and other aldehydes or ketones. These polymers are often called "furanoid" because they resemble furan in their ring structures.

For example, formaldehyde reacts with itself to form methylene bisformaldehyde, which has the repeating unit $\text{H}_2\text{C}=\text{C}(\text{HCHO})_2=\text{CH}_2$. Acetone reacts with itself to form triacetone trimellitate, which has the repeating unit $\text{CH}_3\text{COCH}_2\text{CH}_2\text{COCH}_3$. These are just two examples of many such polymers. In some cases, such as the formation of cellulose, the polymerization reaction is carried out by living organisms.

The reaction of aldehydes and ketones with carboxylic acids is another important reaction. For example, acetylacetone reacts with acetic acid to form the ester, $\text{CH}_3\text{COCH}_2\text{CH}_2\text{COCH}_3$, and also to form the salt, $\text{CH}_3\text{COCH}_2\text{CH}_2\text{COO}^-\text{Na}^+$. This reaction is known as a Fischer esterification reaction, and it is often used to convert aldehydes and ketones to esters.

In addition to these reactions, aldehydes and ketones can undergo nucleophilic addition reactions with organometallic reagents. For example, LiAlD_4 reacts with acetone to form the deuterium-labeled product, $\text{CH}_3\text{CD}\text{COCH}_3$.

Aldehydes and ketones can also undergo nucleophilic addition reactions with other nucleophiles, such as the cyanide ion (CN^-). For example, the reaction of acetone with LiAlD_4 and KCN yields the deuterium-labeled product, $\text{CH}_3\text{CD}\text{C}(\text{CN})\text{COCH}_3$. This reaction is known as the Grignard reaction, and it is often used to convert aldehydes and ketones to cyanohydrins.

II. B. Properties, Photo & React.

Aldehydes and ketones are very reactive due to the presence of the carbonyl group, which is highly polarized.

Designation	Structure	Reactive Site	Reactive Site	Reactive Site
Aldehyde		C=O	O-H	
Ketone		C=O		
Carboxylic Acid		C=O	O-H	
Alcohol				O-H

Section	Value	Unit
Primer	0.001M	Molar
Reaction Time (min)	10	Minutes
Initial Concentration (Moles/Liter)	0.001	Molar
Final Concentration (Moles/Liter)	0.0001	Molar

II. Results & Observations per Page

For each reaction group, determine the average initial concentration and final concentration.

Reaction	Initial Concentration (Moles/Liter)	Final Concentration (Moles/Liter)
Reaction 1	0.001	0.0001
Reaction 2	0.001	0.0001
Reaction 3	0.001	0.0001

III. Analysis

What effect does the concentration of reactants have on the reaction rate? Explain your results.

IV. Further Questions:

Is there a relationship between the initial concentration of reactants and the reaction rate? If so, explain. If not, explain why not.

Initial Concentration

Final Concentration

Reaction Time

Initial Concentration

Final Concentration

Reaction Time