DEQUASUD : Multi-Criterions Comparative analysis between the microstructure network management and the conventional medical of persons with addiction in France

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BACKGROUND

Medical microstructures designed in 2000 where developed to respond to the difficulties encountered in the care of people with addictive behaviour. In these microstructures, established within the general practitioner cabinet, users could find medical doctor at ease with cessation therapy, a psychologist and a social worker. The aim of this study is to evaluate the utility of microstructure network in patients undergoing opioid substitution therapy (OST).

METHODS

Qualitative Study

Assertion of the differences between network microstructure (NMS) and conventional care (CC). There are differences in GP behaviour in OST prescriptions.[1] A comparison was made between NMS's general practionners (GP) and CC's GP who are enthusiast about OST in order to minimize bias. 4 professional working in a NMS were interviewed as well as 4 doctors working in CC. Concerning patients, 4 patients in each arms were interviewed. A team of sociologists extracted the criterion whose appears the most.

Utility functions

Firstly for each criterion utility functions were assessed, comparing different levels within the criterion using a **Visual Analogous Scale**.

Results were then standardized for every criterion, arms, and patients. The lowest answer given was scored 0, and the highest 10 .

This utility function assessment was made on 30 GP (15 in each arms) and on 196 patients (103 in NSM and 93 in conventional care).

Each patients had to answer a **questionnaire** concerning the ease of usage, in both arms of treatment, regarding the 8 criterions enabling criteria-specific utility assessment.

Hierarchy

SMART (Simple Multi-Attribute Rating Technique) was used to hierarchize utility. [2]

Comparing pairs of criterions, we asked first wich one was the most important, and then how much more important. If A was seemed twice more important then UtilityA = 2 x utilityB.

7 direct comparisons were needed to rank and quantify relative weight between criterions. Comparisons were made for GP and patients groups. These weight were associated to each criterions.

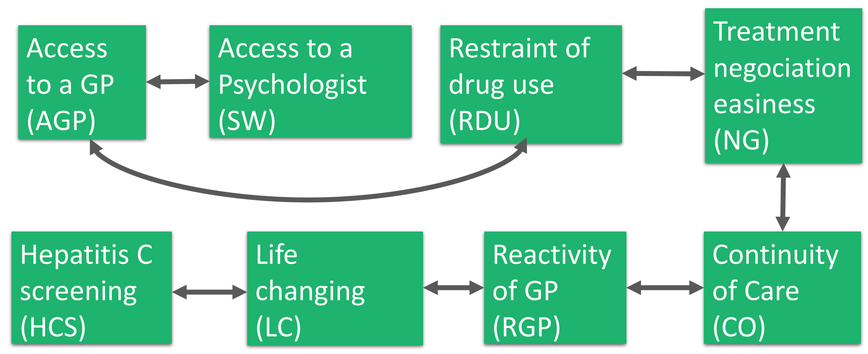

Figure 1 : Two by two comparisson in order to rank utilities

Efficacy

Using these composite utility scales we assessed **efficacy** of both arm of care. The weighted sum represents efficacy.

RESULTS

Utility functions

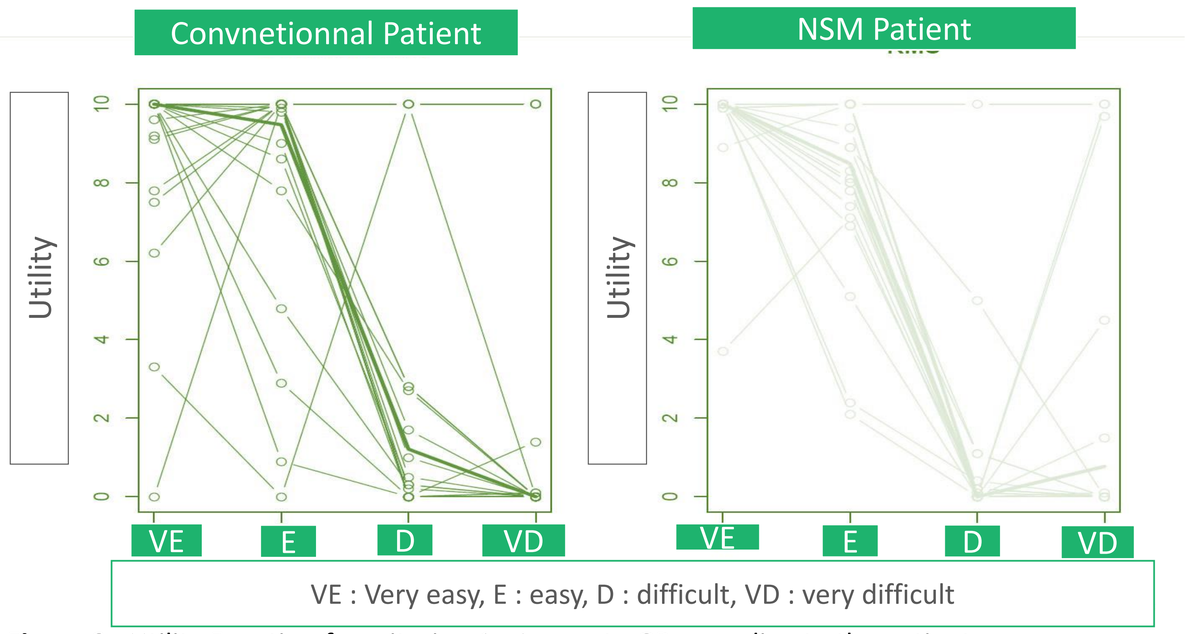

Figure 2 : Utility Function for criterion 1 : Access to GP according to the patient

Utility functions are sigmoidal as expected. The aggregated data allows compensation.

Table 1 : Utility measured for each level in criterion 1 : Access to GP

Group	Very Easy	Easy	Difficult	Very Difficult
Patient NMS	10	8.48	0	0.77
Patient CC	10	9.47	1.21	0
GP NSM	10	7.80	2.19	0
GP CC	8.32	10	3.60	0
Total	**10**	**9.32**	**1.66**	**0**

Each patient had to answer a questionnaire with questions regarding the 8 items. If a patient was having moderate troubles in accessing his GP then **utility concerning this item was 1.66**. This method was repeated For the 8 items.

Table 2 : Mean criteria-specific utility measured by patient for each arm

Group	AGP	SW	RDU	NG	CO	RGP	HCS	LC
Patient CC	6.83	7.12*	4.89	7.45	9	8.68	7.15	8.39
Patient NMS	6.67	8.88*	5.28	7.98	9.15	9.09	6.96	9.06
Total	**6.75**	**8.04***	**5.10**	**7.73**	**9.08**	**8.90**	**7.05**	**8.75**

Each utility function were given the same weight (25%) when computing the mean. Thus each group accounted for the same importance in the decision. Using this utility function, we could easily describe the two groups performance on each criteria.

There is only one significative difference between the groups in mean utility for only one criterion : **access to other professionals** (p=0.0002).

Hierarchy of the Criterion

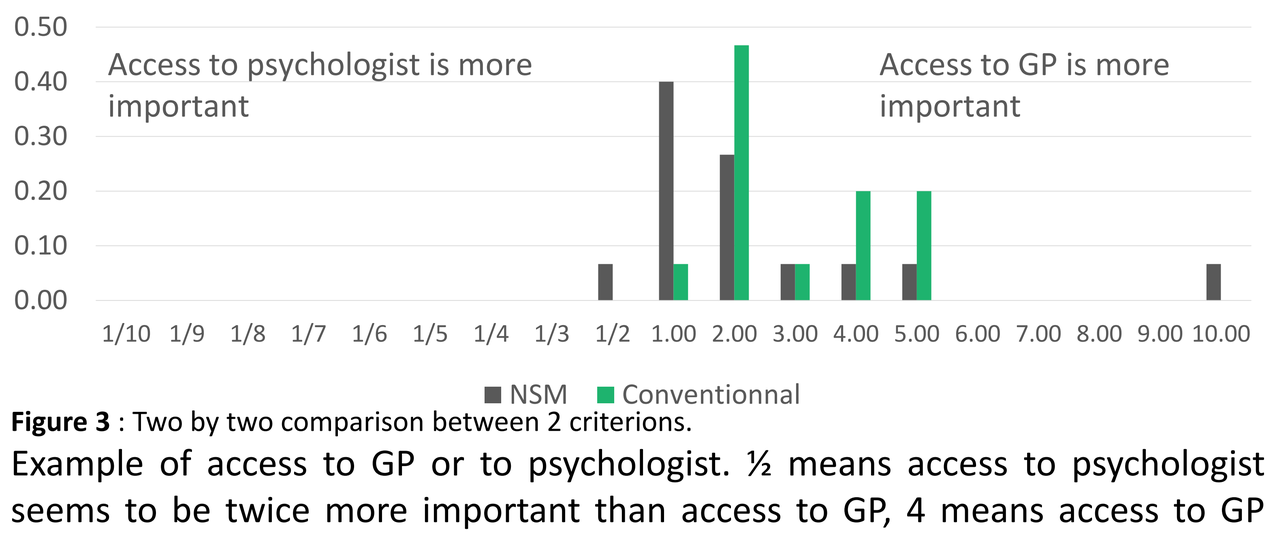

Figure 3 : Two by two comparison between 2 criterions.

Example of access to GP or to psychologist. ½ means access to psychologist seems to be twice more important than access to GP, 4 means access to GP seems 4 times more important than access to psychologist. In this example, **53.33% of GPs in the NMS arm** prefers AGP rather than SW while it **is 93.33% in the CC arm.**

Table 3 : Criterions Ponderation Matrix

Group	AGP	SW	RDU	NG	CO	RGP	HCS	LC
Patient NMS	0.16	0.07	0.16	0.12	0.05	0.16	0.11	0.16
Patient CC	0.19	0.06	0.16	0.10	0.08	0.13	0.10	0.17
GP NSM	0.13	0.07	0.10	0.11	0.08	0.15	0.09	0.27
GP CC	0.15	0.05	0.18	0.07	0.06	0.12	0.10	0.26
Total	**0.16**	**0.06**	**0.15**	**0.10**	**0.07**	**0.14**	**0.10**	**0.22**

NMS's GP put an higher value on the continuity of care than other classes. Those put a higher value on GP accessibility, especially conventional patients. According to GPs, opportunity of a **life changing event** is the most important item concurring at least at a quarter of total utility. Then reactivity of provider, access to care and restrain of drug use are the most important (14% each). On the patient side, **access to an experimented provider**, and restrain of drug use are seems as the three most important.

Efficacy

Table 4 : Measured efficacy and group

Group	N	Mean	Sd
CC	81	7.35	1.58
NSM	99	7.76	1.39
Total	**180**	**7.58**	**1.49**

Efficacy of NSM as reported by the users was calculated using utility measured by patients weighted with the criterion ponderation. There is **no significative difference** between the two groups (p=0.1118)

CONCLUSION

The eight criterions revealed during the qualitative stage of the study are **validated**. Each contribute at least at 5% of total utility (table 2). Preferences do not change much being on the health care professional or user. Although there is a significative difference for one criterion in utility, when weighted there is no significative difference in terms of composite efficacity between the two groups. However as there are some significant differences between GPs composing each groups **further analysis are needed** to sharpen this gross result.

1 (Opiate substitution : place and role of the community networks. Results of a survey among general practitioners) A Gagnon, S Robinet, C Bronner, PJ PARQUET, La revue du Praticien, 2000, 1627-1635

2 Decision analysis and behavioral research W Edwards, D von Winterfeldt - Cambridge University Press, 1986