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Carrefour

des connaissances

en déficience motrice,
sensorielle et du
langage

ATELIER : RÉALISER UNE AFFICHE SCIENTIFIQUE

Présentation adaptée à partir de celle conçue par :
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OBJECTIFS PÉDAGOGIQUES

- Connaître les différentes parties d'une affiche scientifique
- Réaliser une affiche pas à pas

FORMULAIRE DE PRÉSENTATION DE L'ABRÉGÉ

Abrégé

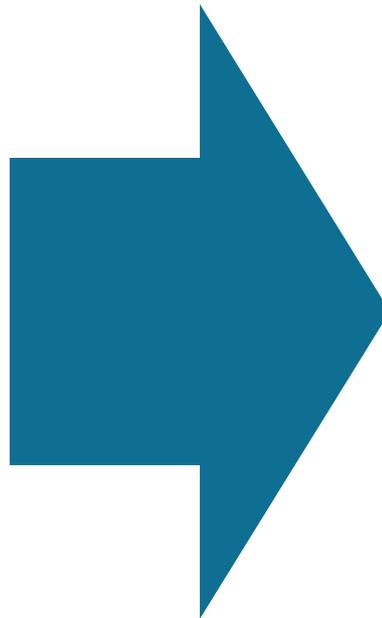
Introduction

Les objectifs du projet

La méthodologie

Les résultats

Les principales conclusions



AFFICHE

Le titre doit attirer l'attention du lecteur: pas trop long et qui donne envie de lire plus loin

Auteur¹, Auteur², Auteur³...

¹Indiquer les affiliations des auteurs, ²les Centres de recherche auxquels ils appartiennent, ³les Universités auxquelles ils sont affiliés, Montréal, Québec, Canada; il est utile d'indiquer une adresse courriel

Résumé

Méthodologie

Tâche expérimentale

Imagez votre procédure, votre tâche.

Résultats

Résultats (suite)

Figure 1

Insérer des figures en format haute-résolution pour qu'elles sortent bien à l'agrandissement.

Figure 2

Bien identifier les axes de vos graphiques et les unités de mesure qu'ils représentent.

Conclusions

Introduction

Références

Remerciements

LES DIFFÉRENTES PARTIES D'UNE AFFICHE

RÉSUMÉ

- Vous pouvez insérer un résumé (abstract), mais le résumé n'est pas toujours inclus dans l'affiche parce qu'il est habituellement facilement accessible dans le programme du congrès. Cela peut laisser un peu plus d'espace pour le texte de l'introduction. Notez que les résumés ne sont pas publiés dans le programme du Carrefour des connaissances.

INTRODUCTION

- Une affiche doit pouvoir se lire en 5 minutes et le lecteur devrait se rappeler facilement de vos résultats et conclusions.
- Ne pas justifier, par un contexte théorique bien ficelé, les hypothèses de recherche. Communiquez rapidement, efficacement vos objectifs et leur pourquoi.
- Réfléchissez à ce que vous voulez que le lecteur retienne de votre étude.

LES DIFFÉRENTES PARTIES D'UNE AFFICHE

MÉTHODOLOGIE

- La méthode n'a pas besoin d'être longue, à moins qu'elle soit très particulière.
- Mentionner brièvement les instruments utilisés et donner une idée de la procédure et décrire les caractéristiques des groupes/ participants à l'étude.
- Un tableau, un schéma peuvent aider à illustrer votre méthode (ou vos résultats, dans le cas d'affiches présentant une recension des écrits).
- Si quelqu'un s'intéresse surtout à votre méthode, vous serez sur place pour répondre à ses questions et lui donner toute l'information qu'il souhaite.

RÉSULTATS

- C'est le but ultime de l'affiche: pensez au résultat le plus important qu'il faudrait retenir de votre recherche et orientez le lecteur vers ce résultat!
- Attirez son attention, décrivez et expliquez bien vos résultats à l'aide de vos figures (Fig. 1), guidez-le vers le(s) résultat(s) intéressant(s) (Fig. 2).
- S'il ne retient que cela de votre étude, c'est déjà excellent! Il se souviendra au moins de votre titre, de votre nom et de ce résultat: il pourra donc vous citer ou reprendre contact avec vous pour plus de détails.
- Utilisez votre imagination pour attirer l'attention sur le résultat pertinent, c'est-à-dire les images, les graphiques, la couleur. Même si une image, dit-on, vaut mille mots, il faut quand même décrire brièvement le graphique.

LES DIFFÉRENTES PARTIES D'UNE AFFICHE

CONCLUSION

- C'est votre dernière chance de marquer! Allez droit au but! Pensez à ce qu'il faut que le lecteur se souvienne en quittant votre affiche et dites-le simplement, directement (en 3 ou 4 points).

TABLEAUX ET FIGURES

- Recourir à des figures, tableaux, schémas qui soutiennent la compréhension du texte.
- Bien identifier les axes de vos graphiques et les unités de mesure qu'ils représentent.

RÉFÉRENCES

- Ajouter quelques références pertinentes.

REMERCIEMENTS

- Remercier les organismes subventionnaires et les personnes qui vous ont aidé dans la réalisation de l'étude, par exemple.

RÉALISER UNE AFFICHE SCIENTIFIQUE

Le contenu :

- Rédiger une courte histoire pour chacune des rubriques : introduction, méthodologie, résultats, conclusion.
- Respecter le lecteur, le soutenir dans son effort de compréhension.
- *De quelles informations mon lecteur a-t-il besoin pour comprendre ma démarche?*

RÉALISER UNE AFFICHE SCIENTIFIQUE

Exigences techniques :

- 45 pouces de large x 36 pouces de haut
- Les caractères des sections de l'affiche doivent être assez grands pour une lecture facile (min. 24 pts, idéalement 28 pts.).
- Fournir les images en haute définition – pour une impression en grand format.
- L'affiche devrait idéalement être dans le sens de la largeur (format paysage), ce qui permet à plusieurs personnes de la voir en même temps.
- Ne pas utiliser trop de couleurs et faire attention aux contrastes. Les couleurs à l'écran d'ordinateur peuvent ressortir dans un autre ton à l'imprimerie! Faire imprimer en finition « mat ».
- Faire imprimer des versions réduites (8,5 x 14 pouces, format paysage) peut être utile pour distribuer aux visiteurs.

PRÉSENTER UNE AFFICHE SCIENTIFIQUE

- Préparez un topo de 2-3 minutes pour présenter oralement votre affiche aux visiteurs; bien que certains aiment lire par eux-mêmes, d'autres préfèrent se la faire expliquer.
- Lors de la séance d'affichage, soyez dynamiques et accueillants (pas retournés vers votre affiche pour éviter les visiteurs)! Pratiquez-vous avec vos collègues et directeurs de recherche.
- Ayez un discours compréhensible pour tous : des jurys aux usagers

QUELQUES EXEMPLES À SUIVRE... ou pas!



The Role of Visual Processing Theory in Written Evaluation Communication

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Background & Problem Statement

Performance is a common aspect of evaluation theory and training. Yet, given the graphic design of evaluation reports to the benefit of the field is sparse. Typically, discussion of use of evaluation findings for each theoretical base on types of use (i.e., conceptual, intrinsic, etc.) and factors affecting such use (e.g., contextual, timing, etc.) has graphic design information about. Such as the result of some reviewing and reporting evaluation findings also are limited in their scope and what is presented often is based on qualitative rather than quantitative research. The authors currently report their discussion to increasing the awareness and tailoring report formats (i.e., structure, readability, and presentation) (Bassens, O'Brien, & Tait, 2007; Best, Reardon, & Olson, 2009; Kowalski, Mowbray, & Egan, 2005). Some have acknowledged the role of graphic design in reporting. Best gives a cursory address, such as regarding that one has a graphic design or "use white space" with no direction on how to make that happen (Harris, 2006; Johnson, 2008, p. 39). A few authors have advocated for the "visuals oriented report" that emphasizes visuals over the traditional report, but these have been short on the details of how to enact their recommendations in a word processing program such that a reader could carry out their recommendations (Hendricks, 1994; Jones & Whitcut, 1999). Design has been offered to give guidance on graphic design. Like providing direction on how to create charts or structure a report. However, those resources are all dated and not consistent in conceptual concepts of effective graphics in graphic design (Johnson & Whitcut, 2006; Johnson, 2008; Jones, 1997; Jones, 1998; Jones & Whitcut, 2006). Thus, the need for an evidence-based conceptual systems findings on graphic design, evaluation levels have the potential to be increasing.

Literature on communication and reporting to evaluate for future efforts included very little on the impact of good graphic design. In fact, some evaluation textbooks do not even mention graphic design, include the discussion of reporting or communication, nor how graphic design can affect legibility, comprehension, or clarity (Chen, 2005; Dewberry, 2001; Goodson, 2005).

Most currently, evaluation reporting literature advises that authors should have an audience and design appropriate formats for communication, such as brochures, publications, stories, or written reports (Barringer, Kuhl, & Myers, 2008; Centers for Disease Control and Prevention, 2008; Kilian, 2005; Patten, 2008; Shalton, 2004; Smith, 2008; Woodworth, 2005). While these are good practices for reporting, the texts do not address how to make the reporting appealing to the audience. The creation of a brochure, for example, does not guarantee that it will be well received by the audience, particularly if visual processing theories have been taken into account.

These authors that mention design also include guidelines, such as guidance to "use white space" with no elaboration or additional readings to help the reader along the article (Johnson, 2008, p. 39). Rodriguez-Campos (2005) addresses the reports, emphasizing the importance of the report's appearance, but when she recommends "adding colors for the graphics and cover" (p. 79), she does not elaborate on how to carry out the recommendation. Meyer's (2008) Executive Report Checklist does not include practices related to graphic design, such as font, statistics, such as "text and statistical information are clearly and precisely arranged" (p. 42). Clear and precise arrangement can be widely interpreted and the checklist gives no further explanation or direction on how to execute the checklist.

The usefulness and comprehension (also known as design evaluation) (Hendricks, 2002) offers little outside of the standard statistics reporting literature. It suggests that, when preparing data collection procedures, use use a format for number outputs. It also states that "visuals such as tables and graphs are an appropriate component to the narrative discussion" (p. 37) but provides no more detail and the sample report provided has no such tables or visuals. Shefferson and Hendricks (2005) explore the use of photographs in a final evaluation report example, a good practice, but there is little to no discussion on what a reader could expect to see in their report. Subsequent studies of use have not included the role of graphic design report layout. Without such investigation, little is known about the extent to which evaluators are applying theories of visual processing and principles of graphic design to support audience understanding of their work. The current of evaluation reports available in the informal science education program gives an opportunity for investigating what evaluations are doing and whether the practice of reporting adheres to best practices in graphic design. Therefore, the purpose of this dissertation was to investigate the research question:

To what extent are graphic design principles carried out in actual professional evaluation client communication?

To do so, the author developed an instrument (checklist) of graphic design best practices, applied the instrument to a sample of formal evaluation communication (summative reports), and their clients also did the use of graphic design (client practices). The author hypothesized that she would see some evidence of use of graphics, but not of graphic design or visual processing theory. The findings on the effectiveness of the instrument are detailed in the final report of evaluation in supporting a better understanding of the state of graphic design in evaluation reporting, generally leading to findings that promote improved communication and enhanced use.

Methodology & Sample

This study is a non-experimental, non-intervent, non-experimental design and used. The study was completed at three points, described here, where the specific design and methods used in each part are discussed.

Part One

The purpose of the first part of the study was to develop an initial instrument to measure the use of graphic design principles in evaluation reporting. The instrument is intended to be used as a diagnostic tool, but to be expanded to the evaluation report as a diagnostic tool, as well as a tool to assess the use of graphic design. It is intended to be used by a report author or those generating reports. (1) prior to the report being written, as a guide to how the report should be formatted; (2) after report is written, as a means to ensure graphic design principles have been followed by the author; and (3) after the reading another author's report, to identify use of graphic design principles. The instrument's scoring mechanism can be used to prompt an author to correct additional checklist principles that should be incorporated into a report.

The selection of principles chosen from an audience content analysis of the literature on multimedia design, graphic design, communication, typography, legibility, and color research. The instrument includes best practices (e.g., type, grids and alignment, graphics, and color) – and a general section that was later eliminated. The instrument included all the items of the instrument, when no more principles could be added to the list of best practices. The total number of principles at this stage was 86. Then, the author reviewed the list for the principles with the strongest agreement to the field, based on the number and extent of the accompanying comments. Eight principles were discarded that appeared weak (i.e., supported by only one reviewer and/or only one field principle) and/or the responses were opposed or unclear. One principle on graph color was eliminated because the checklist was not intended to focus on graphics, specifically. Another principle on image manipulation was retained because the checklist was not designed for the advanced technical skill levels required to carry out that principle. The items on color combinations were discarded because it appeared to have narrow applicability. However, it was ultimately brought back a later iteration as a note to the author because the feedback from part two of the study deemed it important. The unidirectional rating scale was added to ascertain the use of the principles presented in their respective reports. Fully Met, Partly Met, and Not Met.

Part Two

The purpose of the second part of the study was to gather input on the final iteration of checklist items through an expert review panel and using a cross-sectional design. In doing so, the review panel confirmed content validity of the instrument through a procedure described below.

When the first part of the instrument was complete at the culmination of part one of the study, the author assembled a member graphic design expert review panel. A list of potential panels was developed in consultation with the dissertation chair. The final review panel consisted of three graphic design artists, two who had worked in graphic design agencies, and one who had worked in graphic design. The goal of the panel review was to determine what the checklist was effective and what it was not effective. Therefore, the panelists were invited to evaluate the instrument, comment on its elements, and provide input on the items, particularly pointing out whether any principles should have been added, altered, or deleted. The experts were also used one report, randomly selected from the pool of currently discarded reports pulled from the informal Science Education website (discussed further in part three of the study) for reference. Panelists typed their input into the feedback questionnaire and e-mailed it to the author of the study. Each panelist received a \$500 gratuity.

Part Three

The purpose of part three of the study was to apply the checklist to a set of evaluation reports, such that the findings could give insight into the extent of graphic design use in evaluation reporting. In the third part of the study, the author used purposive sampling to collect reports. Each report received all sample items to fully understand.

The informal Science Education (ISE) program of the National Science Foundation was selected as the source for the sampled reports. The program requires summative evaluation and requires the summative reports to be placed on a publicly accessible website. A larger number of reports were available to sample because the ISE program was published between 1996 and 2002. The author did not include the summative reports because she believed they would not have sufficient response to gather the extent of graphic design use. Further, a handful of authors were responsible for multiple reports to

Analysis Procedures

Summative reports were used to identify areas of strong evidence of use of graphic design principles in evaluation reporting. To measure the reliability of the instrument, percent agreement and kappa's alpha, the maximum ordinal analysis of scoring results, were calculated. Kappa's alpha is designed for use in ratings or ordinal data (Barnes [Hosmer's] kappa or Cohen's kappa) and is used with multiple raters (Ludwig, Carter, & Nagel, 2004). Reliability measures across that four conditions are met: (1) data are independently obtained; (2) raters are informed by common instructions; (3) raters are unaware of their ratings; and (4) raters are unaware of those who could be rated (Hosmer & Lemeshow, 2000). The procedures described above for part three of the study required that (1) and (2) be met. However, (3) and (4) were not met as the reports were primarily collected for summative reporting rather than published or reviews. The range of published and background of the raters suggests that (3) is also met. With (1) and (2) met, the author applied use of percent agreement and kappa's alpha for reliability measures.

For the evidence of the use of graphics of the checklist was measured by calculating the total score with the study author's scores, as an expert in the area. The data do not meet the typical assumptions required for using Pearson's correlation, thus an interval level and do not display normal distribution. Nonparametric measures were used instead. Gamma was used to calculate the overall coefficient, as it is the measure of an ordinal correlation calculated with an ordinal scale and it is the nonparametric approach when the data have ties, as would be expected in a small scale (Dugdale, 2005). The significance tables produced are provided in the description of the structure of the checklist.

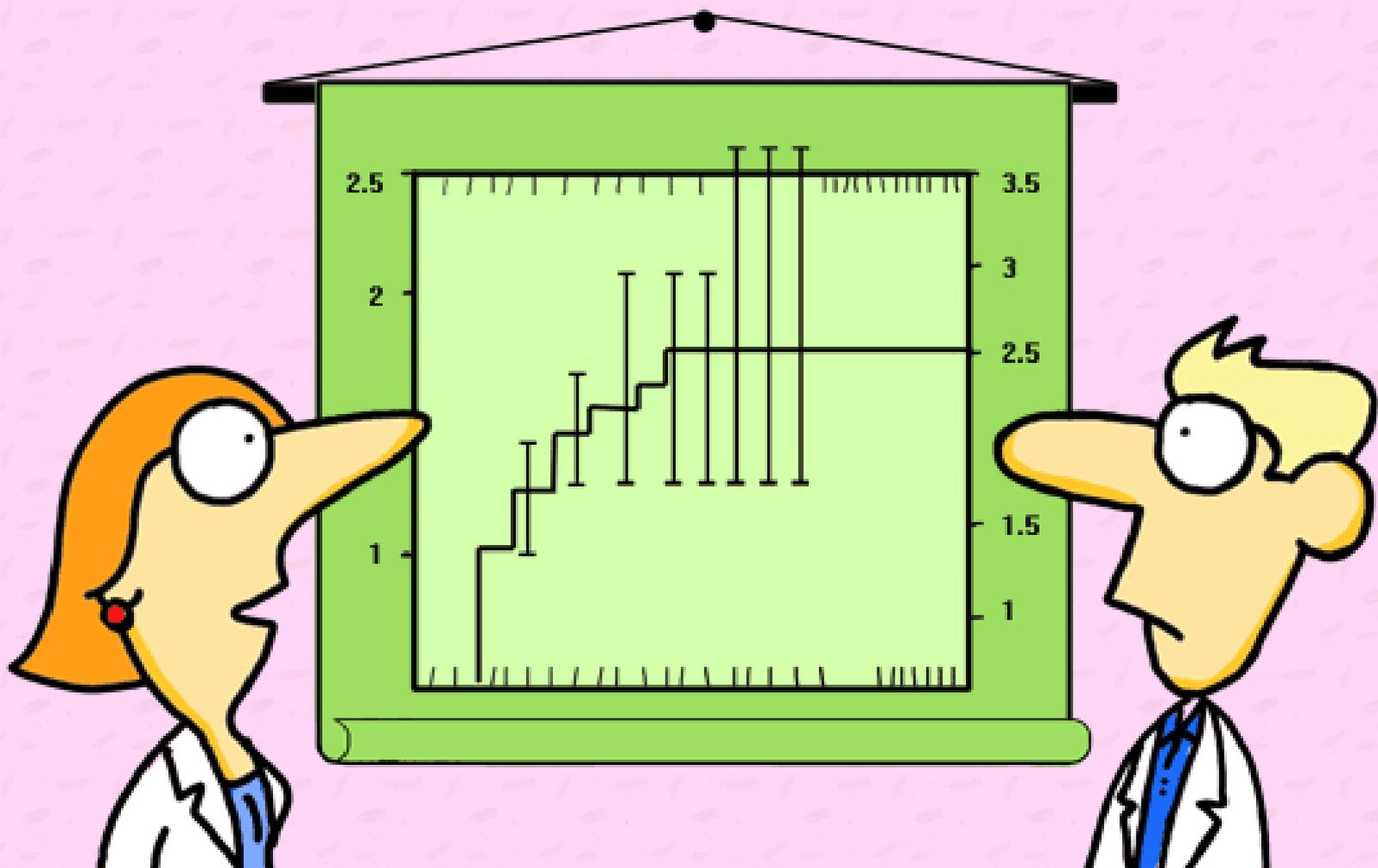
As might be expected with a scale composed of very strong (3) and (4) items, 2008; Johnson & Whitcut, 2006; Johnson & Whitcut, 1999), little variability exists and the possibility that raters might agree by chance is also high. As such, the reliability coefficients are very low – so low that one was not able to be calculated because of missing agreement (Barnes & Lemeshow, 2000). Generally, they ranged from .00 to .75, with most items having reliability coefficients falling at .00 or higher for the sample. While there are many interpretations of levels of strength for reliability coefficients, generally speaking, levels below .40 are considered low to poor (Barnes & Lemeshow, 2000).

Next percent agreement, with a less sophisticated measure, shows a very different picture than the reliability coefficient. Percent agreement ranged from 30.36 to 98.89, with a median of 50%. The items had most percent agreements that were 40% or higher. 60% of the items in the later section of the checklist for use into the high range. After one item each in the sections: Alignment and Color, followed by the 80% checklist for each percent agreement.

While reliability was fairly low (ranging from .00 to .75), about 60 percent agreement was still reasonable (ranging from 30.36 to 98.89). Reliability was likely low due to the small variance found when using a 3-point rating scale. However, the lowest ratings of the extent of graphic design use in each report mirrored the author's ratings of the same reports, with correlations ranging from .30 to .75. Thus, the checklist, despite having the input of a panel of graphic design experts and a group of evaluation practitioners, was deemed sufficiently useful in determining the extent of graphic design use in evaluation reports and for guiding a report author in report development.

Findings

Items frequently cited as fully met were (1) Narrative text is dark grey or black, (2) Background has white/black/red color, (3) Body text is left or justified, (4) No more than 3 fonts are used, (5) No more than 16 colors are used, (6) Color reporting is black and white, (7) No more than 16 colors are used, (8) Color reporting is black and white, (9) No more than 16 colors are used, (10) Color reporting is black and white, (11) No more than 16 colors are used, (12) Color reporting is black and white, (13) No more than 16 colors are used, (14) Color reporting is black and white, (15) No more than 16 colors are used, (16) Color reporting is black and white, (17) No more than 16 colors are used, (18) Color reporting is black and white, (19) No more than 16 colors are used, (20) Color reporting is black and white, (21) No more than 16 colors are used, (22) Color reporting is black and white, (23) No more than 16 colors are used, (24) Color reporting is black and white, (25) No more than 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“Did you really have to show the error bars?”

- Il est important d'être en mesure **d'expliquer les résultats de manière parlante**.
- Trop de chiffres et de détails (tel la marge d'erreur) peuvent être étourdissant.
- **Synthétisez** afin de faire ressortir les conclusions de façon claire.



Inorganic Biochemistry of Iron Proteins

Jared J. Heymann, Claire J. Parker Siburt, Katherine D. Weaver, and Alvin L. Crumbliss

Duke University – Department of Chemistry – Durham, NC



Techniques:

Spectroelectrochemistry
UV-Visible Spectroscopy
Fluorescence Spectroscopy
Difference Spectroscopy
Stopped-Flow Kinetics
SUPREX

Purpose:
To study iron protein biochemistry from the perspective of the iron Protein = Ligand

The Iron Paradox
Iron is needed for nearly every living cell
Iron is toxic and can produce reactive oxygen species & must be controlled

Iron Abundance in Humans
45-55 mg/kg in humans
70% in Red Blood Cells (Hemoglobin)
0.1% in Transferrin
Turnover of transferrin iron is ~30 mg / 24 hours with 80% of this Fe being transported to the bone marrow for hemoglobin synthesis
Bacteria can also target Tf as a source of iron

Proteins act as the 1st & 2nd coordination shell of iron and can modulate the kinetics and thermodynamics of reaction.

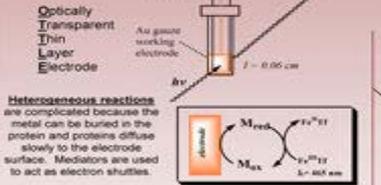
TRANSFERRIN
A mechanistic study of the iron release by receptor-bound transferrin using spectroelectrochemistry

FERRIC BINDING PROTEIN
Role of a synergistic anion on modulating iron uptake in a bacterial transferrin by pathogenic bacteria: A study in kinetics and thermodynamics

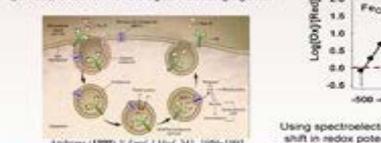
HEMOGLOBIN
Effects of subunit cross-linking on hemoglobin oxidation states determined by spectroelectrochemistry

How is Fe³⁺ removed from Tf when $K_d = 10^{-20}$?
Hypothesis: When transferrin binds to a receptor, the reduction potential shifts into a biologically relevant range.

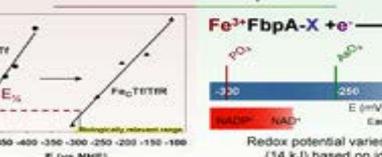
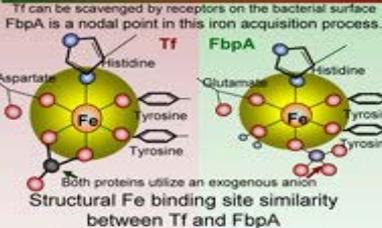
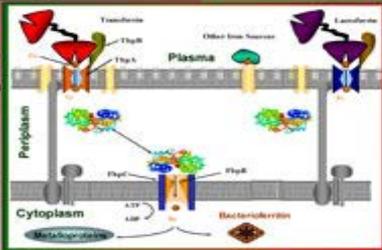
Transferrin
Spectroelectrochemistry utilizes a short pathlength created by an OTTE cell, to measure the variations in visible spectra as the analyte is oxidized or reduced by an externally applied potential. This technique is ideal for a biological analyte because only a small sample volume is required.



Heterogeneous reactions are complicated because the metal can be buried in the protein and proteins diffuse slowly to the electrode surface. Mediators are used to act as electron shuttles.

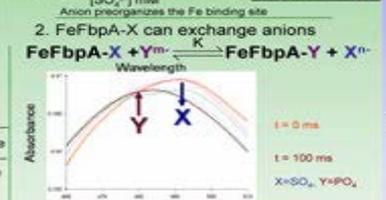
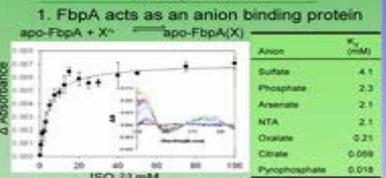


The transferrin receptor is capable of shifting the reduction potential into the range accessible by biological redox agents, allowing for a redox mechanism of Fe release.



Using spectroelectrochemistry, we measured a positive shift in redox potential of Fe-Tf upon receptor binding.

Like Tf, FbpA requires a synergistic anion to facilitate tight iron binding, which may play a role in ease and rate of Fe uptake by the bacteria.



3. Anion identity modulates both thermodynamic stability and redox potential

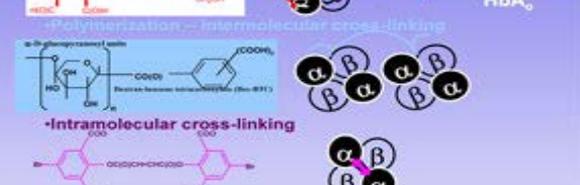
$Fe^{3+} + FbpA-X \rightleftharpoons Fe^{3+}FbpA-X$

Thermodynamic stability varies by two orders of magnitude (14 kJ) based on identity of X.

Iron transport can occur by a redox or non-redox mechanism in the periplasm. The thermodynamic stability and reduction potential are both varied by the identity of the

Chemically modified Hb

- Pyridoxalation
- Pegylation
- Conjugation to polysaccharides & proteins



Sample	E _{1/2} (mV) (NHE)	Oxidation P ₅₀	Log P ₅₀	Oxygenation P ₅₀
HbA ₀	83	1.3	-0.455	2.28
Hemolink	97	0.7	0.394	0.71
Dex-BTC	94	0.9	0.618	1.49
OxylO ₂ bin	106	0.9	1.028	1.11
ae-D5BF	125	1.0	0.461	1.56

Modified Hb Conclusions
Oxygen Transport: Loss of cooperativity, Lower oxygen affinity.
Anaerobic Reduction Potentials: Loss of cooperativity, E_{1/2} potential increased vs HbA₀.

• Cette affiche est surchargée de résultats et de graphiques, on ne sait plus sur quoi se concentrer.

• Retournez au cœur de vos découvertes : un élément central et des éléments secondaires vont ressortir. On ne peut pas tout dire, il faut prioriser.

Expérimentation d'un modèle novateur de thérapie par la danse, une nouvelle modalité d'intervention favorisant l'intégration et la participation sociale des personnes adultes atteintes de déficiences

Auteurs
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⁵Université McGill, ⁶Université de Poitiers



INTRODUCTION

- Depuis 2010, un groupe de thérapie par la danse (TPD) est proposé à différentes clientèles du Centre de réadaptation Lucie-Bruneau, Montréal, Canada.
- La TPD est basée sur les composantes principales du mouvement de la Théorie de Laban (Laban, 2003) : Body (corps); Space (espace); Effort (effort) et Shape (forme).
- D'une durée de 1 h 30/semaine sur 12 semaines, la TPD vise l'intégration et la participation sociale des personnes adultes atteintes de déficiences motrices, l'amélioration des déplacements, de l'équilibre, de l'endurance, etc.
- L'efficacité du programme n'a jamais été formellement investiguée.
- La TPD se distingue des autres groupes similaires retrouvés dans la littérature, puisqu'elle cible des personnes ayant des diagnostics différents et n'exclue pas les personnes ayant des déficits cognitifs.

MÉTHODOLOGIE

Devis quasi-expérimental à mesures pré et post-programme TPD.

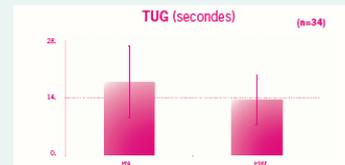
Trois outils ont été utilisés pour mesurer les effets chez des groupes de participants de taille variable au cours des dernières sessions de 12 semaines.

- Flow State Scale (FSS2)** : indique l'implication des participants dans l'activité et la probabilité qu'ils poursuivent une activité de loisir dans le futur
- Time Up and Go (TUG)** : évalue la mobilité
- Mesure des habitudes de vie (MHAVIE 3.0)** : évalue l'impact de la TPD sur les habitudes de vie

RÉSULTATS

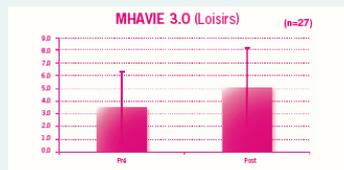


Le FSS2 montre une augmentation significative ($p=0,0048$) du score, indiquant que les participants ont envie de continuer la pratique de la danse ou d'un autre loisir dans la communauté.



En fin de session, le TUG a démontré un changement significatif ($p=0,001$) de la vitesse de l'exécution du test (de 17,3s à 13,5s).

En post-programme, le temps de déplacement moyen du groupe est passé en-dessous de la barre des 14s. Un score supérieur à 14s est corrélé avec un risque de chute.



La MHAVIE indique un changement significatif ($p=0,015$) pour les items regroupés dans la dimension «Loisirs». Aucune différence significative n'a été démontrée pour les dimensions «Déplacements» et «Vie communautaire».

CONCLUSION

L'étude préliminaire des retombées auprès des participants encourage les auteurs à penser que l'atelier TPD contribue à augmenter la vitesse et la mobilité fonctionnelle, le plaisir au cours du mouvement, et modifie de manière positive les habitudes de vie.

Les résultats obtenus ne sont donc pas liés seulement au groupe de danse, puisque l'échantillon de l'étude était petit, la méthodologie n'était pas randomisée, et les sujets ne pratiquaient pas la thérapie par la danse de façon isolée.

Grâce à une subvention de l'Office des personnes handicapées du Québec, l'équipe de recherche a élaboré un protocole pouvant distinguer les effets de la danse et ceux de la réadaptation conventionnelle afin d'évaluer plus spécifiquement l'impact de la TPD. Dans le futur, il serait intéressant de déterminer les facteurs facilitant l'implantation de cette nouvelle modalité. Les professionnels de la santé seraient mieux outillés et pourraient ainsi intégrer la TPD à leur pratique.

RÉFÉRENCES

- Podsiadlo, D. and S. Richardson. 1991. "The Timed "Up & Go": a Test of Basic Functional Mobility for Frail Elderly Persons." *J Am Geriatr Soc.* 39: 142-148.
- Jackson, Susan A., and Robert C. Ekland. 2006. *Flow Scales Manual*. Fitness Information Technology, Inc., U.S.
- Noreau, L., P. Fougère-D'Almeida, and C. Vincent. 2002. "The LIFE-H: Assessment of the Quality of Social Participation." *Technology and Disability* 14 (3): 113-118.

REMERCIEMENTS

L'équipe tient à remercier tous les partenaires qui ont participé de près ou de loin à l'élaboration du projet depuis ses débuts!

• **Voici un modèle d'affiche intéressant** : les résultats sont chiffrés, mais aussi expliqués en mots juste en dessous. Si un visiteur passe en votre absence, il comprendra sans problème.



1 Introduction

Pratiquer régulièrement une activité physique est un défi majeur pour les personnes ayant la sclérose en plaques (SP). Une proportion de 78 % d'entre elles seraient inactives, comparé à 38 % pour la population en général.

PRATIQUE DE L'ACTIVITÉ PHYSIQUE



Population atteinte SP

PRATIQUE DE L'ACTIVITÉ PHYSIQUE



Population générale active

Certains symptômes (ex. : fatigue, mobilité réduite) sont encore perçus, à tort par plusieurs personnes atteintes, leurs proches et leurs professionnels de la santé, comme des obstacles insurmontables pour passer à l'action.^{1,2,3}

Pourtant, l'activité physique est reconnue comme bénéfique et est maintenant considérée comme un aspect important de la prise en charge globale pour :^{4,5,6}

1. Briser le cercle vicieux de la sédentarité ou combattre les conséquences néfastes de l'inactivité
2. Améliorer la condition physique (fonctions d'apport énergétique et musculaires)
3. Réorganiser l'efficacité motrice dans l'exécution des activités de la vie quotidienne, du travail et des loisirs

De plus, peu d'outils d'information sur la pratique de l'activité physique sont disponibles. Il est devenu pertinent de concevoir un guide expliquant comment, concrètement, inclure la pratique d'activités physiques comme saines habitudes de vie pour les personnes ayant la SP.

Dans ce contexte, la Société canadienne de SP-Division du Québec et le Centre de réadaptation Lucie-Bruneau ont collaboré pour produire, en 2013, l'outil nommé «Pratique de l'activité physique-Guide à l'intention des personnes ayant la SP».⁷

2 But du guide

- Fournir les lignes directrices fondées sur les données probantes en matière de pratique de l'activité physique
- Présenter les concepts de base pour comprendre les fondements d'une pratique de l'activité physique globale et réussie
- Offrir des programmes d'entraînement à personnaliser selon les besoins et les intérêts de chacun

3 Présentation du guide

3.1 Lignes directrices pour la pratique de l'activité physique⁸

Les directives canadiennes pour la pratique de l'activité physique à l'intention des adultes ayant la SP se veulent un outil de référence pour l'identification d'objectifs dans la promotion et la prescription de programmes d'exercices. Elles fournissent les données MINIMALES de référence en précisant la fréquence, l'intensité, la durée et le type d'activité physique nécessaire pour AMÉLIORER la condition physique.

Type	Exemples	Temps ou durée
Activité aérobie avec les membres supérieurs et inférieurs	Marcher, propulser le fauteuil roulant, nager, pédaler et ramer	Augmenter graduellement le niveau d'activité jusqu'à faire au moins 30 minutes d'activité aérobie à chaque séance d'entraînement.
	Fréquence Deux fois par semaine	Intensité L'activité aérobie devrait être d'intensité modérée.
Type	Exercices de renforcement musculaire	Repos
Exercices de renforcement musculaire	Fréquence Deux fois par semaine	Repos Accorder au moins une journée de repos aux muscles entre les séances d'exercices de renforcement. Repos de 1 à 2 minutes entre chaque série et chaque type d'exercice.
	Temps ou durée Deux séries de 10 à 15 répétitions de chaque exercice	

3.2 IABC de la pratique de l'activité physique

Le mode de vie influe considérablement le niveau d'énergie. Il a un impact sur la capacité à fournir des efforts pour s'entraîner. Il faut d'abord se questionner sur :

- l'alimentation et l'hydratation
- le sommeil
- la cigarette et l'alcool

Faire des efforts plus grands qu'à l'habitude lors de la pratique d'activités physiques permet de développer la condition physique. Pour assurer la qualité et la quantité adéquate des efforts déployés, retenir les premières lettres des cinq mots suivants :

- Fréquence – F
- Récupération – R
- Intensité – I
- Temps (ou durée) – T
- Type (ou nature) – T

Pour les personnes ayant une SP, une attention toute particulière est portée à la récupération. Elle se manifeste différemment chez chacun et c'est grâce à elle que les capacités s'amélioreront. Le carnet d'entraînement est d'ailleurs un outil à inclure dans sa pratique afin de faire le constat de la pratique hebdomadaire.

3.3.1 Programmes de posture et de respiration

Objectif – Observer sa posture et prendre conscience de sa respiration⁹



3.3.2 Programmes pour les personnes mobiles favorisant la stabilité du corps

Objectif – Développer la stabilité

Les auteurs ont ajouté une section «efficacité motrice» au schéma classique de l'entraînement en circuit, immédiatement après l'activation, et avant le circuit.

Actions motrices qui impliquent une stabilisation dynamique du corps



Actions motrices impliquant des rotations transverses du corps haut par rapport au corps bas

Actions motrices impliquant des rotations transverses du corps bas par rapport au corps haut



3.3 Programmes d'entraînement

L'attribution de la condition physique entraîne différentes complications et affecte considérablement l'autonomie motrice et, par conséquent, l'autonomie sociale et la qualité de vie.

La condition physique est particulièrement importante pour les personnes ayant la sclérose en plaques parce qu'elle a une influence directe sur la fatigabilité.

Sans entraînement, la condition physique se détériore au-delà des effets de la maladie. L'entraînement permet de contrecarrer, parfois même d'éviter les conséquences néfastes de la maladie ainsi que celles de l'inactivité.

L'entraînement de la condition physique – surtout l'endurance – est particulièrement utile aux personnes avec limitations motrices parce qu'il permet :

- de réduire le coût en énergie des efforts fournis pour les gestes quotidiens
- de relever le seuil d'activation de la fatigue
- de raccourcir la durée de la récupération après un effort

3.3.2 Programmes pour les personnes mobiles et celles qui utilisent un fauteuil roulant

Objectif – Développer la condition physique par l'entraînement en circuit

Activation
Circuit d'entraînement

Aérobic 1

(marche avec aide technique, déplacement fauteuil roulant)



Aérobic 2

Retour au calme



L'entraînement en circuit, combiné à l'entraînement par intervalles aérobie, permet d'améliorer la condition physique générale. Un circuit comporte un certain nombre de stations d'exercices qui sont visitées l'une après l'autre. Chaque station consiste en un exercice qui s'adresse à un groupe de muscles. L'ensemble du circuit permet de mobiliser successivement toutes les grandes chaînes musculaires du corps humain, établit un effort global obtenu par l'accumulation des efforts consentis à chaque station. La durée de cet effort global a pour effet d'améliorer l'endurance générale.

4 Conclusion

- Le Guide contient des informations essentielles et des programmes à personnaliser pour accompagner les personnes ayant la SP vers l'autogestion de la pratique de l'activité physique.
- Bouger davantage et de mieux en mieux en gardant en tête : gain d'énergie, autonomie motrice, autonomie sociale et qualité de vie.

5 Références

1. Société canadienne de la sclérose en plaques, Info-SP du 9.1.2014. http://msociety.ca/fr/faq/infosp/infosp_20140109.html
2. Beckmann, H., de Groot, V., Scholten, M. A., Kampefs, J. C. L., & Lamberson, G. J. Physical Activity Behavior of People with Multiple Sclerosis: Understanding How They Can Become More Physically Active. *Phys Ther*, 2010; 90(7): 1001-1013.
3. Latimer-Cheung, A.E., K.A. Martin-Giblin, A.L. Hicks, R.W. Mott, L.A. Pitzer, M. Duggan, G. Whelan, R. Prasad et K. M. Smith. «Development of Evidence-Informed Physical Activity Guidelines for Adults with Multiple Sclerosis». *Arch Phys Med Rehabil*, Septembre 2013, 94(9): 1829-1836.
4. Latimer-Cheung, A.E., Pitzer, L.A., Hicks, A.L., Martin-Giblin, M., Frensch, A.M., MacCollin, K.A. and Mott, R.W. Effects of Exercise Training on Chronic Mobility Fatigue and Health-Related Quality of Life among Adults with Multiple Sclerosis: A Systematic Review to Inform Guideline Development. *Arch Phys Med Rehabil* 2015; 94: 1800-1828.
5. Vanden-Abeele, L. Programmes d'entraînement de la personne avec la sclérose en plaques : l'expérience d'hydrokinésithérapie. 2^e éd., Sherbrooke, Université de Sherbrooke, Faculté d'éducation physique et sportive, 2006.
6. Larochette, J. et J. Vanden-Abeele. *Entraînement en circuit pour les personnes avec des lésions motrices : fondements théoriques et principes méthodologiques*, 2^e édition révisée et augmentée. Sherbrooke, Université de Sherbrooke, FÉPS, 2004.
7. <http://scleroseenplaques.ca/fr/mv/ve/ve/publications.html>
8. Société canadienne de la sclérose en plaques. *Directives canadiennes en matière d'activité physique chez les adultes atteints de sclérose en plaques*. [En ligne]. <http://www.ccsq.ca/fr/mv/ve/ve/201404>
9. Moreault, L. *Respirer des pieds à la tête avec la Gymnastique Holistique*, Montréal, Institut International de Gymnastique Holistique, 120 pages, 2015.

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• Bel exemple d'affiche de type plus clinique.
 • La portion des résultats s'avère être la présentation de l'activité clinique. Tout est clair.

4 JUIN : C'EST À VOTRE TOUR!

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Bonne présentation!