

## **NUTR\*4900 (Section 03): Selected Topics in Human Nutrition Prevention of Obesity - What's the Evidence?**

### **Winter 2014 Course Syllabus**

**Department of Family Relations and Applied Nutrition  
University of Guelph**

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**Office hours:** by appointment

#### **Course Description**

This course requires reading and discussion on selected areas in human nutrition and its application; formal class reports and term papers. The topic focus will be recent studies in obesity prevention in infancy and early childhood. Primarily for Applied Human Nutrition majors.

**Class times:** Tuesday and Thursday, 10:00 – 11:20 am, MACS 209

#### **Course website:**

Announcements, updated schedules, grades, and other information will be posted on CourseLink, a website for on-campus courses:  
<https://courselink.uoguelph.ca/shared/login/login.html>.

**Prerequisite(s):** FRHD\*3070 (Research Methods: Family Studies)  
NUTR\*4010 (Nutritional Assessment)  
NUTR\*3090 (Clinical Nutrition I)

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#### **Learning Outcomes:**

1. To develop competency in the critical appraisal of journal articles in selected applied nutrition topic areas.
2. Effectively communicate – in writing and orally – critical appraisals of research and research articles.
3. To gain proficiency in facilitating and participating in informed discussion about research.
4. To develop peer review skills on oral and written work appraising the research literature.

**Evaluation:**

Method	% of final grade	Date
<b>Oral:</b>		
A1. Critique of assigned reading (in pairs)	10	Jan. 28 – Feb. 11
A2. Facilitate discussion of critique of assigned reading (in pairs)	5	Jan. 28 – Feb. 11
B2. Oral seminar on term topic	15	Feb. 27 – Apr. 1
Meaningful participation in class discussions	10	Ongoing
<b>Written:</b>		
A3. Critique of group of assigned readings – infancy or children (4 of the papers plus background)	15	Due Feb. 25
B1. Summary and copy of 5 abstracts on term topic	5	Due Feb 6
B3. Peer review of term paper	10	Receive Mar 20 Return Mar 27
B4. Comprehensive literature review on term topic	30	Due Thurs Apr. 3

**Skills for Appraising Evidence .....****Searching – in class****Managing Evidence****RefWorks**

Use RefWorks to manage references for your term paper. RefWorks is a web-based database manager and bibliography creation tool. It allows you to collect references from a wide variety of electronic resources (e.g., PubMed) to create your own personal reference database. If you use Microsoft Word, your collected references can be seamlessly integrated into your term paper following any known standard format for the text of the paper and the reference list. Check out Refworks at: [http://www.lib.uoguelph.ca/research/create\\_bibliographies](http://www.lib.uoguelph.ca/research/create_bibliographies)

**Appraisal****Statistics Help**

~~First see me, then we may need to consult another person. Contact the Data Resource Centre in McLaughlin library. [http://www.lib.uoguelph.ca/resources/data\\_resource\\_centre/](http://www.lib.uoguelph.ca/resources/data_resource_centre/)~~

**Communicating**

- a. **General Help Writing an Appraisal** Learn how to write a literature review through [http://www.lib.uoguelph.ca/assistance/writing\\_services/](http://www.lib.uoguelph.ca/assistance/writing_services/)
- b. **Paraphrasing others' ideas and work** Knowing how summarize or adapt others' work for different purposes is a key skill needed in applied nutrition. Take the Learning Commons' online tutorial on correct ways to cite work, at: <http://www.academicintegrity.uoguelph.ca/index.cfm>.

- c. **Referencing Style** Nutrition journals use many different styles for referencing – for this course pick one and use it correctly.  
[http://www.lib.uoguelph.ca/research/electronic\\_reference/index.cfm?fuseaction=eReference.detail&categoryID=15&category=Citation%20%2F%20Style%20Guides](http://www.lib.uoguelph.ca/research/electronic_reference/index.cfm?fuseaction=eReference.detail&categoryID=15&category=Citation%20%2F%20Style%20Guides)

In this department, several professors use the American Psychological Association style (APA). Others use the International Committee of Medical Journal Editors Guidelines on Referencing. At: [http://www.icmje.org/manuscript\\_1prepare.html](http://www.icmje.org/manuscript_1prepare.html)

## Resources and References (in Courselink)

### Appraising the Evidence – Key Websites

National Collaborating Centre for Methods and Tools. At: <http://www.nccmt.ca/index-eng.html>  
 This centre is the major centre for methods in appraising public health evidence in Canada.

The Cochrane Collaboration. Cochrane Handbook for Systematic Reviews of Interventions.  
<http://www.cochrane.org/training/cochrane-handbook>

The Cochrane is the largest volunteer organization in the world doing systematic reviews. Their methods are considered the standard for a well conducted systematic clinical medical review.

### Appraising Nutrition Research

Evidence from diverse fields informs applied nutrition practice. To help with review, a series of eight articles were published in the last few years in the Journal of the Academy of Nutrition and Dietetics (formerly the J Am Dietetic Association), with examples from applied nutrition.

The articles are:

1. Boushey C, Harris J, Bruemmer B, Archer SL, Van HL. Publishing nutrition research: a review of study design, statistical analyses, and other key elements of manuscript preparation, Part 1. J Am Diet Assoc 2006;106:89-96.
2. Boushey CJ, Harris J, Bruemmer B, Archer SL. Publishing nutrition research: a review of sampling, sample size, statistical analysis, and other key elements of manuscript preparation, Part 2. J Am Diet Assoc 2008;108:679-88.
3. Harris JE, Boushey C, Bruemmer B, Archer SL. Publishing nutrition research: a review of nonparametric methods, part 3. J Am Diet Assoc 2008;108:1488-96.
4. Harris JE, Gleason PM, Sheean PM, Boushey C, Beto JA, Bruemmer B. An introduction to qualitative research for food and nutrition professionals. J Am Diet Assoc 2009;109:80-90.
5. Bruemmer B, Harris J, Gleason P et al. Publishing nutrition research: a review of epidemiologic methods. J Am Diet Assoc 2009;109:1728-37.

6. Gleason PM, Harris J, Sheean PM, Boushey CJ, Bruemmer B. Publishing nutrition research: validity, reliability, and diagnostic test assessment in nutrition-related research. *J Am Diet Assoc* 2010;110:409-19.
7. Sheean PM, Bruemmer B, Gleason P, Harris J, Boushey C, Van HL. Publishing nutrition research: a review of multivariate techniques--part 1. *J Am Diet Assoc* 2011;111:103-10.
8. Harris JE, Sheean PM, Gleason PM, Bruemmer B, Boushey C. Publishing nutrition research: a review of multivariate techniques--part 2: analysis of variance. *J Acad Nutr Diet* 2012;112:90-8.

## **Readings for Section 1 on Obesity Prevention in Infants and Children**

### **Background Readings**

1. Ball GD, Ambler KA, Chanoine JP. Pediatric weight management programs in Canada: where, what and how? *Int J Pediatr Obes* 2011;6:e58-e61.
2. Dietitians of Canada. WHO Growth Charts Adapted for Canada 2013. <http://www.dietitians.ca/Secondary-Pages/Public/Who-Growth-Charts.aspx>
3. Juonala M, Juhola J, Magnussen CG et al. Childhood environmental and genetic predictors of adulthood obesity: the cardiovascular risk in young Finns study. *J Clin Endocrinol Metab* 2011;96:E1542-E1549.
4. Tirosh A, Shai I, Afek A et al. Adolescent BMI trajectory and risk of diabetes versus coronary disease. *N Engl J Med* 2011;364:1315-25.
5. Waters E, de Silva-Sanigorski A, Hall BJ et al. Interventions for preventing obesity in children. *Cochrane Database Syst Rev* 2011;CD001871.
6. Whitaker RC, Wright JA, Pepe MS, Seidel KD, Dietz WH. Predicting obesity in young adulthood from childhood and parental obesity. *N Engl J Med* 1997;337:869-73.

### **Example Critique of Adult Prevention Study**

Forster JL, Jeffery RW, Schmid TL, Kramer FM. Preventing weight gain in adults: a pound of prevention. *Health Psychol* 1988;7:515-25.

### **Primary Citations for Studies to be Reviewed**

1. Campbell KJ, Lioret S, McNaughton SA et al. A parent-focused intervention to reduce infant obesity risk behaviors: a randomized trial. *Pediatrics* 2013;131:652-60.
2. Daniels LA, Mallan KM, Battistutta D, Nicholson JM, Perry R, Magarey A. Evaluation of an intervention to promote protective infant feeding practices to prevent childhood obesity: outcomes of the NOURISH RCT at 14 months of age and 6 months post the first of two intervention modules. *Int J Obes (Lond)* 2012;36:1292-8.
3. de Ruyter JC, Olthof MR, Seidell JC, Katan MB. A trial of sugar-free or sugar-sweetened beverages and body weight in children. *N Engl J Med* 2012;367:1397-406.

4. Fitzgibbon ML, Stolley MR, Schiffer L et al. Family-based hip-hop to health: outcome results. *Obesity (Silver Spring)* 2013;21:274-83.
5. Fostér GD, Linder B, Baranowski T et al. A school-based intervention for diabetes risk reduction. *N Engl J Med* 2010;363:443-53.
6. Jansen W, Borsboom G, Meima A et al. Effectiveness of a primary school-based intervention to reduce overweight. *Int J Pediatr Obes* 2011;6:e70-e77.
7. Llargues E, Recasens A, Franco R et al. Medium-term evaluation of an educational intervention on dietary and physical exercise habits in schoolchildren: the Avall 2 study. *Endocrinol Nutr* 2012;59:288-95.
8. Ostbye T, Krause KM, Stroo M et al. Parent-focused change to prevent obesity in preschoolers: results from the KAN-DO study. *Prev Med* 2012;55:188-95.
9. Telford RD, Cunningham RB, Fitzgerald R et al. Physical education, obesity, and academic achievement: a 2-year longitudinal investigation of Australian elementary school children. *Am J Public Health* 2012;102:368-74.
10. Thivel D, Isacco L, Lazaar N et al. Effect of a 6-month school-based physical activity program on body composition and physical fitness in lean and obese schoolchildren. *Eur J Pediatr* 2011;170:1435-43.

### **Policies**

#### **Missed Work**

If you are unable to meet a due date for a course requirement due to illness or compassionate reasons, please advise me by email as soon as possible. Where possible, this should be done in advance of the missed due date, but otherwise, just as soon as possible after the due date, and certainly not longer than one week later. Appropriate written documentation of your inability to meet the course requirement is required.

#### **Late Work**

Late written work will be accepted up to one week late with 10% penalty (unless accompanied by a medical note).

#### **Academic Misconduct**

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The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. This is a widespread problem in science.

**Plagiarism involves using the work, ideas and/or the exact wording of other people or sources without giving proper credit to others for the work, ideas and/or words in their papers.** In practical terms for this course, no more than 5 words in a row should be exactly the same as another's work. Do your best to **always** cite your sources. If still unsure, talk to me.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study. Instructors have access to and the right to use electronic and other means of detection. It is your responsibility to know and abide by rules pertaining to academic misconduct. These rules can be found in the 2013-2014 Undergraduate Calendar and on the following website:  
<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Students who appear to have engaged in academic misconduct will be reported to the Chair of Family Relations and Applied Nutrition, who will render a decision, or under certain circumstances, forward a report to the Dean of the College of Social and Applied Human Sciences for a decision.

### Assignments:

Method	% of final grade	Date
<b>Overall</b>		
Meaningful participation in class discussions	10	Ongoing
<b>Section 1</b>		
A1. Critique of assigned reading (in pairs)	10	Jan. 28 – Feb. 11
A2. Facilitate discussion of critique of assigned reading (in pairs)	5	Jan. 28 – Feb. 11
A3. Critique of group of assigned readings – infancy or children (4 of the papers plus background)	15	Due Feb. 25
<b>Term Topic</b>		
B1. Summary and copy of 5 abstracts on term topic	5	Due Feb 6
B2. Oral seminar on term topic	15	Feb. 27 – Apr. 1
B3. Peer review of term paper	10	Receive Mar 20 Return Mar 27
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### Overall

~~This is a small class. Everyone's participation is needed to make this course a success. It is expected that you attend and participate fully in all classes. Come to class prepared to ask questions and to comment on questions and/or issues raised by discussants and presenters. However, I appreciate that oral participation is not for everyone; just because a person is quiet in class does not mean that s/he is not engaged in the content. Therefore, the participation grade for this course is based on two components:~~

**COMPONENT 1** is based on attendance and meaningful class participation. This includes frequency *and* quality of questions and comments during discussions. Critiquing research is not a spectator sport. We want to hear from you! What do you think about a particular study or

question or issue *and why?* Avoid “me too!” contributions; similarly, don’t disagree for the sake of disagreeing. Rather, *justify* your position.

This component also considers the quality of the feedback you provide on your classmates’ presentations and rough drafts of term papers. The feedback should be helpful and constructive. If you are absent from class, I would appreciate an email indicating why. Participation will be graded using the evaluation in Appendix A.

**COMPONENT 2** is based on activities that I cannot see or may see from a different perspective. To help me determine this component of your participation grade, complete the reflective questions in Appendix A (also posted to CourseLink). Assign yourself a grade out of 10 for this component – I will take your self-assigned grade into consideration in determining your overall grade for participation.

Please – just like at the movies – turn your cell phones off in class. No texting. No facebooking. No tweeting. No emailing. Thanks. (adapted from A Buchholz)

## **A. Section 1 – Critique of Assigned Articles**

### **A1. Oral critique of assigned reading (two people) (Appendix C)**

You will work in pairs on this assignment. There will be 2 presentations per class. **There is a maximum of 20 minutes for each presentation plus 15 minutes for discussion (answer questions from classmates and me).**

You will critically appraise the assigned research article. See Appendix B – Critiquing a Journal Article. In preparing the presentation, you are expected to seek out background information necessary to understand the article (e.g., supplementary data linked to the article; previously cited studies; websites), to be able to explain the research methods, technical terms and results to the class, and to answer questions concerning the article. You will have the opportunity to answer questions when a classmate facilitates discussion related to your assigned article. See below.

**One presenter will submit their PowerPoint presentation to Dropbox by 6:00 a.m. the day of the presentation, as Microsoft 2007 version.** There will be a 10% (out of 100) penalty for late submissions. ~~I will email you to confirm that I received your presentation. Your presentation will be downloaded to my PC laptop (for you to use in class), which I will also use to print a hard copy of slides that I can review.~~ **Therefore revised presentations will not be accepted just before or during class.**

- Ensure that all of your material on each slide is visible so that I can print a hard copy of slides properly (e.g., clipart should not cover text).
- Cite all sources on the last slide – including any advice from experts.
- Both presenters will be marked individually on their speaking skills. The content of the presentation will be marked jointly. Both presenters must present a portion of the information and be prepared to respond to questions.

- Practice your talk together to ensure you can complete in 20 minutes!

## **A2. Facilitate discussion for critique of assigned reading (Appendix D)**

**Students will work in pairs to facilitate the discussion. There is a maximum of 15 minutes to lead class discussion of the research article previously critiqued.**

- This time allotment includes both discussant and presenter comments.
- The role of the discussants is to facilitate a deeper discussion of key issues from the article. As a pair you will facilitate discussion of 2 key issues related to methods (e.g., sampling, research design, and measurement).
- Thank the presenters
- The questions can relate to any aspect of study design, data collection, measures, study population, etc.
- Aim for insightful and thought-provoking questions, rather than predictable or “boring” questions.
- An example of a boring question, “Do you think the results of this study are generalizable to the larger population?” (results rarely are). A more thought-provoking – and therefore interesting – question might be, “Given that this study was on Caucasian pre-menopausal women, the results are clearly not generalizable to the rest of the Canadian population. In your opinion, is this an issue? Why or why not?”
- The presenters should participate in the discussion, can clarify points, etc.
- Summarize discussion at the end, giving final interpretation and overview.
- You can use PowerPoint if you like, but this is not required. In fact, it may be preferable not to, so that you can practice discussion skills without relying on PowerPoint.
- If PowerPoint is required, one discussant will submit their PowerPoint presentation to Dropbox by 6:00 a.m. the day of the presentation, as Microsoft 2007 version. I will email you to confirm that I received your slides.

## **A3. Written critique of 4 of assigned articles (Appendix E)**

You will critically appraise a subset of the articles (4 infant studies, 4 of 6 child studies). Therefore, thoughtful class participation in the oral reviews will be most helpful in completing the critique. **You are to interpret the findings from the 4 articles presented in class, and write a 4-page report** summarizing the current knowledge from the articles presented, on the current evidence for Obesity Prevention. The report should include an introduction (including objectives of the report), the study designs, numbers of subjects, a summary of the main findings, strengths and limitations of the research, implications of the results, conclusions, and your suggestions for future research. You should integrate the research findings from the journal articles and not simply do a critical appraisal of each article separately. You should paraphrase rather than use quotations extensively. Use headings and sub-headings to organize your report and include page numbers. A summary table may be helpful. The page limit does not include the number of separate pages for the title page and the reference section (use single space). References can be in either APA or biomedical style.



**You are to complete this critique independently. Students should discuss the assignment with classmates and others, but the writing should be your own – 5 word rule!**

Checklist for the critique:

- Maximum of 4 pages**
- Should have a title page and reference section in addition.
- Your name and page numbers are in the header or footer of the document
- 8.5" x 11" paper
- Double-spaced
- 2.5 cm. margins
- 12-point font size

The critique is to be submitted to Dropbox by **Feb. 25**, as a Word document or pdf.

## **B. Term Topic**

### **B1. Outline and Abstracts (no evaluation form)**

Each student will choose an "obesity" prevention or treatment topic and will critique about 10 primary (meaning new research) studies on your chosen topic. (You will need to review more articles for background). You are encouraged to make an appointment to discuss and narrow your topic with me prior to submission. **It is important to "frame or limit your topic" so that you can do a meaningful review with about 10 studies, so all topics must be approved.** The title of the paper, a 2-page outline (single-sided, double-spaced, 2.5 cm margins, 12 point font) of the term paper and a copy of the abstracts from 5 relevant (ideally published in the last 5 years), primary (original) references must be submitted to Courselink by **February 6, 2014**. Please make sure your name and the title of your topic is at the top of the page. I will return to you **Feb 11<sup>th</sup>**, indicating "approved" or "requires revision". Students who need to revise should meet me **Feb 13<sup>th</sup>** during class time for an appointment. You will be assigned a specific time. You will need to resubmit to Courselink no later than **Feb 25<sup>th</sup> for marking**. I will email you an approval of the topic. (adapted from J Randall Simpson)

### **B2. Oral presentation re: partial literature review (Appendix C)**

Each student will present an oral review on their topic in the second part of the semester. In general, there will be 2 presentations per class. **There is a maximum of 30 minutes for each presentation (this allotment includes time to answer questions from classmates and me).**

You should provide a rationale of why the specific topic is important to our understanding of obesity and summarize and critically appraise 3 of your primary (original) journal articles. Integrate the research findings from the journal articles and develop some ideas about how the results contribute to our understanding - don't simply do a critical appraisal of each article separately. In preparing the presentation, you are expected to seek out background information necessary to understand the selected topic (e.g., supplementary data linked to the

article; previously cited studies; websites). Also, discuss key issues related to methods (e.g., sampling, research design, and measurement).

**Presenters will submit their PowerPoint presentation to Dropbox by 6:00 a.m. the day of the presentation, as Microsoft 2007 version.** There will be a 10% (out of 100) penalty for late submissions. I will email you to confirm that I received your presentation. Your presentation will be downloaded to my PC laptop (for you to use in class), which I will also use to print a hard copy of slides that I can review. **Your emailed presentation will be considered the final presentation and therefore revised presentations will not be accepted just before or during class.**

### **B3. Draft term paper and peer review (Appendix F)**

Your draft term paper will be peer-reviewed by another student. Students will be marked on the quality of their peer-review. So, each student will submit a draft of their paper to CourseLink **March 20th**. The paper will then be sent to an anonymous reviewer who will complete the peer review form and will make comments and suggestions for change using Track Changes. They will submit their reviews to Dropbox **March 27th**. I will then send the review to each author by email. Peer reviewers are anonymous, but authors are not because of the oral presentations. Your draft term paper will not be marked directly.

### **B4. Submission of Final Paper (Appendix E)**

You will have until **April 3<sup>rd</sup>** to complete the paper and address the suggestions from the peer reviewer that you feel improve the paper. The final paper will be submitted to CourseLink as a Word document or as a pdf.

### **Guidelines for Term Paper**

The term paper should be about 12 pages long and include an introduction (including your research question), a summary of the main findings, strengths and limitations of the research, implications of the results, conclusions, and your suggestions for future research. You should paraphrase rather than use quotations extensively. Use headings and sub-headings to organize your report and include page numbers. **At least 10 recently-published, "primary" journal articles should be critiqued to address your research question.** If you decide to use tables to summarize the studies, the paragraph text must complement and integrate findings in the tables.

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The University of Guelph may not have all the articles that you require for your term paper. Therefore, you may need to obtain articles that are central to your research question through inter-library loan: [http://www.lib.uoguelph.ca/services/borrowing/interlibrary\\_loan/](http://www.lib.uoguelph.ca/services/borrowing/interlibrary_loan/)  
- Allow adequate time for ordering articles.

Checklist for the term paper:

- Maximum of 12 letter-size pages** (if more than 12 pages are submitted, only the first 12 pages will be graded)

- Should have a title page, reference section (use single space for the reference section), and appendix that shows the abstract linked to each "primary" journal article reviewed in your term paper
- Your name and page numbers are in the header or footer of the document
- Put your home mailing address on the title page so I can return the term paper at the end of the semester
- Double-spaced
- 2.5 cm. margins
- 12-point font size

The page limit does not include the number of separate pages for the title page, the reference section, and the appendix.

**You are to complete the term paper independently. You are not to collaborate on the term paper (it is not a group effort).**

**Appendix A - Reflection on Participation (STUDENT TO COMPLETE)**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Describe your participation – as you see it - in this course. Do you consider your participation as “active”? Why or why not?

2. Describe your preparation for classes.

3. Is your participation in NUTR\*4900 different than in other courses you have taken, or are currently taking, at the University of Guelph? Why or why not?

4. What other elements do you think I should consider in determining your participation grade? e.g.: Did you chat with your friends/room-mates/family about course content? Did you do extra readings? Did you seek assistance with writing or researching your term paper/seminar, or with statistical interpretation? Did you provide quality feedback to your classmates on their presentations and rough draft of term paper?

**YOUR SELF-ASSIGNED GRADE FOR PARTICIPATION \_\_\_\_\_ /10**  
*[This grade will be taken into consideration for your overall participation grade]*

**NUTR\*4900 PARTICIPATION (10%, INSTRUCTOR TO COMPLETE)**

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

	Number of times
Excused absences	
Unexcused absences	
Late for class	

**Participation in classes: Low active / Moderately active / High active**

**Comments:**

**Instructor comments re: your reflection on participation:**

**TOTAL      /10**

## Appendix B - Critiquing a Journal Article

Critical appraisal involves identifying strengths and limitations not just of the article itself, but importantly, the design of the study, and the science, on which the article is based. Keep this in mind as you consider each of the components below.

### Title

Does the title adequately describe the content of the article?

### Abstract

Are the purpose of the study, basic methods, main findings, and main conclusions stated?

### Introduction

- Is this study justified based on the presented literature?
- Is the rationale for the study clearly and concisely summarized, and is it well justified?
- Are the objectives or hypotheses clearly stated?

### Methods

#### Participants

- Are there clear and appropriate inclusion and exclusion criteria?
- Is the sample size justified and adequate?
- Is the selection of the participants adequately explained?
- Is the sample selection procedure adequate to meet the study objectives?
- Are participants representative of the population of interest?
- Are control groups used and are they adequate and appropriate?
- How were the control group participants selected?
- Have control group participants been properly matched with the intervention group participants on the basis of age, sex, ethnicity, socio-economic status, etc.?
- Is the response rate given?
- Is information on the non-respondents given to allow for comparison to respondents?
- Are there drop-outs?
- Are details provided on dropouts and the reason for discontinuation of the study?
- Are all participants accounted for?

#### Research design

Is the research design (e.g., cross-sectional design; randomized design) clear and appropriate for the objectives?

- What is the rationale for this design?
- Are extraneous variables controlled?

#### Methods

- Were appropriate methods used to collect data that will meet the objectives?
- Is sufficient detail about data collection methods provided to allow for replication of the study?
- Have the appropriate statistical methods been used for analysis?
- Are the statistical methods explained clearly and in detail?
- Have they provided the significance level for deciding on the outcome?

- Have strategies for handling missing data or loss of participants been described?
- Was informed consent obtained?

### Results

- Are descriptive results given (to determine if groups are representative or comparable)?
- Are the results that are emphasized important in answering the questions of interest?
- Are there any discrepancies in the results presented?
- Are the tables and graphs self-explanatory?
- Are there any errors in the results?
- Are the tables and graphs necessary?
- Are the tables and graphs also discussed in the text (but there is not excessive overlap)?
- Do the tables and graphs agree with the text?
- Is complete information reported (e.g., coefficients, confidence intervals, test values, degrees of freedom, p values)?
- Are confounding variables considered?
- Has it been shown that intervention and control groups are comparable on important variables?
- Is adjustment necessary to compensate for important differences between intervention and control groups?

### Discussion

- Are new and important aspects of the study emphasized?
- Does the discussion interpret rather than repeat the results section?
- Are the limitations and biases of the methods and results discussed?
- Can generalizations be made to the larger population?
- Does this study confirm or contradict previous reports?
- If results were unexpected, are possible reasons given to explain these findings?
- Are the results of clinical or social significance?
- Is the effect of missing data or confounding variables considered?
- Are the conclusions warranted from the results? (Sometimes, non-significant results are discussed as if they were statistically significant).
- Are implications of the results discussed and properly qualified?
- Were the study questions answered?
- Are future research directions discussed?
- What research questions are left unanswered?

### Other

- Length: appropriate for the scientific content presented, or wordy and repetitive?
- Language, grammar of high quality?







**Appendix D - Evaluation of Facilitating Discussion of Assigned Reading**

**Discussants:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**1. Issues/findings**

10	9	8	7	6	5	4	3	2	1
Identifies two issues in the areas of sampling, research design, measurement, etc. Provides background for the audience.				←————→			Focuses on only one issue or covers too many for the audience to grasp. No background.		

**2. Questions for audience**

10	9	8	7	6	5	4	3	2	1
Posed two relevant questions for the audience to encourage discussion of critical issues. Able to keep the discussion going.				←————→			No questions, or trivial questions which do not help the audience to understand critical points. Discussion falls flat.		

**3. Delivery**

10	9	8	7	6	5	4	3	2	1
Relaxed, enthusiastic. Is concise and clear. Professional. Easily heard.				←————→			Tense, appears bored. Rambles and/or confuses audience with explanations. Unprofessional. Too quiet or too loud.		

**Comments:**

Total	/30
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### Appendix E – Written Evaluation

- Written Section 1 Review  
 Term Topic Literature Review Paper

Student: \_\_\_\_\_

<b>The objective (or purpose) of this paper</b> is stated in specific terms. It is clear which aspects of the problem will be considered. It is sufficiently restricted to permit analysis in some depth. The meanings of terms or concepts which are central to this paper have been clearly explained; definitions given.	/ 5
<b>The review of literature</b> provides a synthesis of relevant material, ideas are well understood; and information has been used accurately. Discussion of the studies is integrated. It has been structured to be consistent with the scope of the topic; shows some breadth of coverage of topic, as well as depth.	/ 20
<b>The sources of information</b> were most appropriate for problem chosen. Maximum use was made of primary sources. Sources were sufficient for this project.	/ 10
<b>Critical appraisal of the literature</b> is well done with a thorough discussion of the strengths and limitations of the studies.	/ 25
<b>Recommendations for future research</b> are appropriate.	/ 5
<b>Organization, presentation, and composition.</b> Skillful, pleasant, and easy to read. Paragraphs develop logically. Meanings are clear. Sentence structure is concise, grammatically correct, and cohesive. Minimum use of extraneous or repetitious material. Systematically using subheadings. Ample margins allowed. References are easy for the reader to find and follow. No spelling or punctuation errors. References are cited correctly, following the APA or biomedical style.	/ 30
<b>Recommendations for health professionals</b> are clear and based on the review.	/ 5
<b>Total</b>	<b>/100%</b>

Comments:

**Appendix F - Peer Review Form for Term Paper**  
adapted from Guidelines for a *Canadian Journal*

Title:

**Word Count:**

After reading the manuscript, please answer the questions by circling your response. If you respond "No", "Uncertain" or "Improvement required", a detailed explanation should be provided to assist the author of the paper.

**Introduction**

1. Is the research question or hypothesis clearly stated?  
 Yes       Improvement required       No
2. Is the stated research question **relevant**?  
 Yes       Uncertain       No
3. Is the relevant background literature analyzed and referenced in a thorough yet concise fashion?  
 Yes       Improvement required       No

**Results**

4. Are the literature review results clearly presented?  
 Yes       Improvement required       No
5. Are the results relevant to the research subject?  
 Yes       Improvement required       No
6. Are the tables and figures (if any) appropriate and clear?  
 Yes       Improvement required       No
7. Are the results credible (i.e., do they seem probable)?  
 Yes       Improvement required       No

**Discussion**

8. Do the discussion and conclusions follow from the results?  
 Yes       Improvement required       No
9. Are other interpretations examined and discussed?  
 Yes       Improvement required       No
10. Are the limits of the review and of the results described?  
 Yes       Improvement required       No

**References**

11. Are the references appropriate?  
 Yes       Improvement required       No

On a separate page, please provide your detailed comments on the above answers or on other aspects of the review which, in your opinion, will assist the author of the paper.