A LITERATURE REVIEW ON DEPRESSION AMONG WOMEN: FOCUSING ON ONTARIO

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University Health Network Women’s Health Program 2006©

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A LITERATURE REVIEW ON DEPRESSION AMONG WOMEN: FOCUSING ON ONTARIO

UNIVERSITY HEALTH NETWORK WOMEN’S HEALTH PROGRAM 2006©

PREPARED FOR: ONTARIO WOMEN’S HEALTH COUNCIL,
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• Judy Fiddes from the Ontario Women's Health Council
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• The UHN Libraries and their staff.
EXECUTIVE SUMMARY

The purpose of this project was to systematically review the literature to report on the epidemiology of depression among women in Ontario, identify those women at highest risk for depression and their barriers to care. Coordinated by the University Health Network Women’s Health Program, in collaboration with a multidisciplinary team of investigators, this report summarizes the evidence by identifying key issues that need to be addressed to improve prevention and treatment programs and ensure adequate availability and access to mental health services in Ontario. Any improvement of women’s mental health, however, must also consider the social, economic and cultural contexts of their lives.

Summary of the Evidence

Epidemiology of Depression among Ontarian Women

• Ontario women are twice as likely to suffer from depression compared to men.
• Approximately 5.4 to 6.1 per cent of women suffered from an episode of depression in the past year; these estimates are similar to those reported for all Canadian women; however, they are not available by smaller geographic areas.

Women at Higher Risk of Depression in Ontario

• The following groups are at higher risk of depression: women at specific life stages (adolescence and perinatal) and women in special groups:
  • unemployed and working women
  • aboriginal women
  • immigrant and ethnic minorities
  • intimate partner violence
  • history of child maltreatment
  • lone mothers
  • lesbian, gay, bisexual, transgender and transsexual women
  • lower socio-economic status
  • comorbid physical illness
• Program development, diagnosis, and timely access to skilled treatment and services for depressed women, especially those at higher risk for depression, needs to be augmented across the province.
• Screening for depression among all subgroups of women who are at higher risk for depression should be encouraged in primary care; however, this is only effective if there is a system that can provide timely access to care (e.g., social support, psychotherapy and pharmacotherapy).
• There is a lack of evidence on the epidemiology and predictors of depression; factors that promote resilience and good mental health; health service use and barriers to care for Ontario women within each subgroup.
Barriers to Care

- Women reported more availability, acceptability and accessibility barriers to mental health care than me.
- Acceptability barriers (i.e., individuals do not receive care because of competing time or resource demands or because of their attitudes towards illness, health-care providers or the health-care system) were the most frequently reported as were access to care issues. Nearly 80 per cent of Ontario women reported unmet mental health care needs.
- There are significant gaps in the research with respect to effective strategies for the prevention and treatment of women at higher risk for depression (Specific barriers for each subgroup are found in Part Three).

<table>
<thead>
<tr>
<th>Type</th>
<th>Barrier</th>
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<tbody>
<tr>
<td>General Barriers</td>
<td>Accessibility</td>
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<tr>
<td></td>
<td>Acceptability</td>
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<tr>
<td></td>
<td>Availability</td>
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<tr>
<td>Barriers to Seeking Mental Health Care</td>
<td>Depression is undiagnosed by primary care clinicians</td>
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<td></td>
<td>Treatment does not conform to standards in practice guidelines</td>
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<td></td>
<td>Poor adherence with antidepressant medications</td>
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<td></td>
<td>Lack of availability of treatments other than antidepressants</td>
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<td></td>
<td>Societal stigma</td>
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<td>Lack of insurance</td>
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<td></td>
<td>Lack of a regular primary health-care provider</td>
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<td></td>
<td>Lack of sufficient time with provider</td>
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<tr>
<td>Barriers in High-Risk Populations</td>
<td>Lack of research evidence for best practices with respect to screening, prevention and treatment of depression among subpopulations of women</td>
</tr>
<tr>
<td></td>
<td>Structural issues including wait-times, short physician visits, physician shortages</td>
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<tr>
<td></td>
<td>Lack of continuity of care</td>
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<td></td>
<td>Belief that distress is ‘normal’ and does not require treatment</td>
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<td></td>
<td>Previous negative experiences with healthcare-providers</td>
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<td></td>
<td>Social isolation and lack of knowledge about available supports</td>
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</tbody>
</table>
OVERVIEW

Depression is a common disorder that affects more than one million Canadians per year, and women are twice as likely than men to be affected during their lifetime. This disorder can occur at any stage of women’s lives regardless of their education, race, ethnicity and income. Depression is a vital public health issue that inflicts suffering, diminishes health and functioning and may result in economic burden to the individual, society and third-party payers (Ustun, T. B., yuso-Mateos, J. L., Chatterji, S., Mathers, C., & Murray, C. J. L., 2004). Without proper treatment, this disorder can have a disabling effect that leads to personal suffering, poor self-care, impaired personal relationships, physical illness, lack of adherence to medical treatments, loss in income, substance-use, self harm and loss of life by suicide. In order to reduce the risk and burden of depression among women in Ontario, it may be helpful to implement new strategies for prevention and treatment targeted to women. The first step is to review the literature to elucidate, where possible, the characteristics of Ontario women at risk for depression, and the barriers to treatment so that this knowledge can be incorporated into health policy, services and research agendas.

The Ontario Women’s Health Council commissioned this literature review with the goal of answering the following questions:

- What is the prevalence of depression among women in Ontario? How do these estimates compare between regions in Ontario, across Canada and to other nations?
- What subgroups of women are most at risk for depression?
- What are the barriers to treatment and prevention for women with depression?
- Are there unique or additional barriers for women in specific risk groups?

Given these goals, this review was divided into different parts whereby each expert investigator in the multidisciplinary research team critically appraised the literature in their content-area using established systematic review methods. Part One identifies knowledge gaps and health policy issues. Part Two describes the overall picture of depression among women in Ontario and Canada; the scales and classification systems used to detect and diagnose depression; the prevalence and incidence of depression; risk factors for the disorder; and the burden of illness of depression. Part Three focuses on describing the epidemiology of depression among high risk groups identified and determined by the investigative team, a priori based on mental health expertise and a review of salient literature. Part Four describes specific considerations for access to care and barriers faced by women with depression. Details on the framework are found below in Table 0.1.
### Table 0.1: Framework of the Literature Review on Depression among Women

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Knowledge gaps and implications for policy makers, health-care providers and researchers</td>
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</table>
| 2       | Epidemiology of depression in women | • Diagnosis and detection of depression  
• Prevalence of depression among women  
• Burden of illness  
• Prevention |
| 3       | Groups of women most at risk for depression | • Age/Life stage - such as adolescence, perinatal (pregnancy/postpartum), and perimenopause  
• Special groups – such as unemployed/working women, immigrant, intimate partner violence/abuse, history of child abuse, homelessness, lone mothers, Aboriginal, LGBTT (lesbian, gay, bisexual, transgender and transsexual), lower socio-economic status  
• Comorbid physical illness – heart disease, stroke, cancer, respiratory illness, diabetes mellitus, and musculoskeletal disorders |
| 4       | Treatment and Barriers to care | • Description of care for women with depression  
• Access to care  
• Barriers to care (summary of barriers for specific subgroups) |
METHODOLOGICAL FRAMEWORK

This comprehensive, evidence-based review was commissioned by the Ontario Women's Health Council to describe the prevalence of depression among women in Ontario, identify those most at risk for depression and the barriers to care that they face. The team of researchers was comprised of psychologists, psychiatrists and epidemiologists with expertise in women's health and sub-fields specifically reflective of the causes and consequences of, and treatments for, depression in women. The vast number of peer-reviewed papers on women and depression were narrowed down by the research team to meet the goal of this review (to focus on women in Ontario) using the methods described below.

Systematic Review Methods

The systematic review used the methods of the Canadian Task Force on Preventive Health Care (2003), and the U.S. Preventive Services Task Force (Harris, R. P. et al., 2001), including the following steps:

1. Comprehensive literature searches by a professional librarian (MS) of MEDLINE, EMBASE, CINAHL, PSYCHINFO, and the Cochrane Library from 1990 to the present using preset filters that identify meta-analyses and systematic reviews (for the search strategy please refer to Appendix A). In brief, the keywords used to identify articles that examined the prevalence of depression are outlined in Appendix A and included 'depression', 'depressive disorder', 'unipolar depression', 'seasonal affective disorder', 'major depression', 'depress*', or 'dysthymia' combined with 'epidemiology', 'prevalence', 'Ontario', 'Canada', 'health care utilization', 'health service accessibility', 'barriers to care', and 'women' or 'female'. More specific searches for each chapter were performed using keywords identified by the author of each chapter (refer to Appendix A). Finally, the reference lists of relevant articles were scanned to identify eligible articles.

2. In addition, for publications examining depression among women in Ontario we consulted government and other organizations such as the Ministry of Health and Long-term Care (MOHLTC), Health Canada, Public Health Agency of Canada, Institute of Clinical and Evaluative Sciences (ICES), Canadian Institute of Health Information (CIHI), Canadian/Ontario Women's Health Associations and Foundations for reports and other grey literature. Recent peer-reviewed presentations of Ontario data were included (Appendix B).

3. Citations from the literature searches were reviewed by project research staff (Brooke Filsinger, Melissa Kennedy) and categorized into the pre-defined chapters. The researchers also removed duplicates, and abstracts were reviewed to exclude non-relevant articles according to the inclusion/exclusion criteria below:

Inclusion Criteria

All French and English-language articles were considered eligible if they met the following criteria:

a. Type of study design: meta-analysis or systematic review and Canadian primary articles (cross-sectional, prospective or retrospective cohort, case-controls studies and, randomized control trials).

b. Type of subjects: women diagnosed with depression or reporting depression (including major and minor depression, dysthymia, depressive symptoms and subsyndromal depression).
c. **Type of outcome**: prevalence/incidence estimates of depression, barriers to care, health-care utilization or suicide/suicide related outcomes (ideation/Attempts).

**Exclusion Criteria**

Papers were excluded if they did not report data collection dates. Analyses or results were not stratified by sex, and results included bipolar or other psychotic disorders, or the study methods were not reported. Published letters, comments, editorials, case series and case reports, and non-peer reviewed publications (e.g., dissertations) were also excluded from this review.

4. Standardized, independent review of all remaining eligible papers was performed by each investigator according to the above inclusion/exclusion criteria. International primary studies of ‘good’ or ‘fair’ quality were only included when there were no systematic reviews or meta-analyses for a particular topic.

5. The pool of included papers was finalized with consensus reached on any discrepancies.

6. All meta-analyses, systematic reviews and primary studies from Canada that were included in this review were assessed for quality by each investigator using previously validated criteria (Tooth, L., Ware, R., Bain, C., Purdie, D. M., & Dobson, A., 2005; Oxman, A. D. & Guyatt, G. H., 1991).

7. Standardized data abstraction was conducted by research staff using an MS Access database for all included studies rated ‘good’ and ‘fair’. Data abstraction results are presented in table format at the end of each chapter. Tables report on statistics for depression and women unless indicated otherwise.

<table>
<thead>
<tr>
<th>Table 0.2: Quality Rating of Articles Included on This Review</th>
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<tbody>
<tr>
<td><strong>Chapter</strong></td>
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<tr>
<td>2. Epidemiology Of Depression</td>
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<td>3. Depression As A Public Health Issue</td>
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<tr>
<td><strong>Life Stages</strong></td>
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<td>4. Adolescence</td>
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<td>5 Perinatal</td>
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<td>6. Perimenopause</td>
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<td><strong>Special Groups</strong></td>
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<tr>
<td>7 Unemployed And Working Women</td>
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<td>8 Aboriginal Women</td>
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<td>9 Immigrants And Ethnic Minorities</td>
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<td>10 Intimate Partner Violence</td>
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<td>11 History Of Child Maltreatment</td>
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<td>12 Homeless Women</td>
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<td>13 Lone Mothers</td>
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<td>14 Lesbian, Gay, Bisexual, Transgender and Transsexual</td>
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<td>15 Lower Socio-economic Status</td>
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<tr>
<td>16 Comorbid Physical Illness</td>
</tr>
</tbody>
</table>
8. Fifteen per cent of all papers were audited to assess the reliability of eligibility, quality assessment and data abstraction.

9. Qualitative synthesis of results. In particular, this report summarized all information identified by Ontario women pertaining to prevalence and risk of depression and barriers to treatment or care.

Finally, the information specialist searched the grey literature for any documents that reported on the prevalence and incidence of depression, barriers and utilization of mental health care in Ontario and Canada. Sources of grey literature were identified by each investigator, the information specialist and key informants. In addition to searching all identified sources, the information specialist contacted several agencies as part of the search.

## Results

After exclusion/inclusion criteria were applied, 482 citations were considered eligible at the abstract stage, 35 meta-analyses, 18 systematic reviews and 92 primary articles were included in the review by the investigators. The most common reasons for exclusion were study subjects not reporting unipolar depression (40 per cent excluded), inappropriate study type (16 per cent) and inappropriate outcome measure (12 per cent). For more details please refer to Figure 0.1. Table 0.2 describes the number of papers included and study designs for each chapter.

### Figure 0.1: Eligibility of Studies* Considered for Inclusion into the Review

<table>
<thead>
<tr>
<th>1454 Citations Identified by IS (Appendix A)</th>
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<tbody>
<tr>
<td>482 Abstracts Included (S)</td>
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<tr>
<td>971 Abstracts Excluded (S)</td>
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<tr>
<td>145 Studies Included (I)</td>
</tr>
<tr>
<td>18 Systematic Reviews</td>
</tr>
<tr>
<td>35 Meta-Analyses</td>
</tr>
<tr>
<td>92 Primary Studies</td>
</tr>
<tr>
<td>337 Studies Excluded (I)</td>
</tr>
<tr>
<td>40% did not report on appropriate subjects</td>
</tr>
<tr>
<td>16% did not have an appropriate study type</td>
</tr>
<tr>
<td>12% did not have appropriate outcomes</td>
</tr>
<tr>
<td>8% did not stratify results by sex</td>
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<tr>
<td>8% were not relevant</td>
</tr>
<tr>
<td>5% did not report methodology</td>
</tr>
<tr>
<td>5% did not have incidence/prevalence estimates</td>
</tr>
<tr>
<td>2% were conducted prior to 1990</td>
</tr>
<tr>
<td>1% did not specify data collection dates</td>
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<tr>
<td>4% were excluded for other reasons</td>
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</tbody>
</table>

Abbreviations: S, Women’s Health Program research staff; I, investigators; IS, information specialist
PART ONE:
IMPLICATIONS FOR HEALTH-CARE
POLICY-MAKERS, PROVIDERS
AND RESEARCHERS
IMPLICATIONS FOR HEALTH-CARE POLICY-MAKERS, PROVIDERS AND RESEARCHERS

This report was commissioned by the Ontario Women’s Health Council to systematically review the literature on women and depression in Ontario and identify key issues that require attention by health care policymakers, providers and researchers. To facilitate the use of this report, we will present our findings here and the evidence for these findings in subsequent chapters. There is a need for further public and professional education, prevention, identification and assessment of mental disorders, as well as better access to evidence-based collaborative-care mental health services throughout our health system. In some areas, this report identifies knowledge of service gaps that need to be filled. The outcomes of such actions are fundamental to improving the mental health of women in Ontario. The findings are divided into two parts; those more applicable to policymakers and mental health-care providers and those more applicable to researchers and research funders.

KEY ISSUES FOR DECISION-MAKERS AND MENTAL HEALTH-CARE PROVIDERS

It is vital that health-care policy-makers and providers develop and implement programs, interventions or services that are reflective of evidence, based the best available evidence. Listed below are the evidence-based issues that need attention from health-care policy-makers and providers to improve depression prevention, awareness and treatment programs for women in Ontario.

**GENERAL**
- Provide public education and special depression management programs for women that enhance early and effective treatment and relapse prevention.
- Implement education programs aimed at primary care providers to screen and treat those at higher risk for depression.
- Support effective strategies, including social, psychotherapeutic and pharmacologic, to prevent or shorten episode duration and prevent recurrence in at-risk populations.
- Develop and adapt interventions for reducing the disability associated with depression.
- Develop gender-sensitive mental health indicators.
- Support community-based approaches for suicide prevention inclusive of the entire community (e.g. youth, parents, extended family and marginalized individuals).
- Implement accessible services with expanded evening and weekend hours and reasonable wait times in all Local Health Integration Networks (LHINs).
- Provide transportation to and from the healthcare site, on-site childcare, or reimburse lower socio-economic status (SES), homeless and unemployed women for these costs.

**ADOLESCENTS**
- Consider screening and enhanced treatment of depression in female adolescents and in assessing the effectiveness of antidepressants, psychotherapies and combined treatments.
- Implement and regularly evaluate prevention or intervention programs for depression in adolescent girls.
• Target adolescent girls in rural areas of Ontario and teens in First Nations communities who are distressed to facilitate referral to appropriate services.

• Encourage more partnerships between schools, families, and primary care workers to assist professionals to identify, refer, or manage adolescent girls with depression.

• Educate adolescent girls and primary health care providers about the early warning signs of depression, other mental health comorbidities and reduce the fear of stigmatization in adolescent girls.

• Remind health-care professionals about the importance of a respectful confidential communication with teen patients and their families (i.e. through ongoing professional education).

PERINATAL
• Increase awareness in health professionals and women themselves about perinatal depression and its treatment.

• Encourage the development, identification and timely access to skilled treatment services for depressed mothers and their infants.

PERIMENOPAUSE
• Encourage health-care providers to consider and address psychosocial and biological factors in midlife women who present with depression.

UNEMPLOYED AND WORKING WOMEN
• Encourage employers or policy-makers to create better and more accessible help for mental health problems in working women.

• Encourage employers to have mental health resources available and better known to employees and provide training to foster understanding in supervisors.

• Support employers to give appropriate employee autonomy and train managers to recognize and appropriately refer employees with depression.

IMMIGRANTS AND ETHNIC MINORITIES
• Systematically provide information to new immigrants about mental health services through existing social services and English as a Second Language (ESL) classes.

• Identify immigrant women at highest risk of depression, for referral to culturally appropriate crisis intervention or prevention programs.

• Examine the need for multilingual and multicultural mental health professionals in different sectors, such as community mental health centres and hospitals.

• Mandate change within Canadian mental health-care organizations based on diversity, multiculturalism and anti-racism.

• Encourage practitioners to consider patients’ gender, ethnicity, culture, religion, health beliefs, etc in achieving successful outcomes in mental health.

• Support education programs such as training, self-study or professional development activities in mental health professionals on cultural norms and values in mental health issues in various minorities.
**Aboriginal Women**

- Develop programs to empower women with depression that are community-based, culturally sensitive, and cognizant of the complexity of the changing socio-familial position of Aboriginal women.
- Train health-care providers to recognize symptoms of depression within an Aboriginal context.
- Investigate the transfer of control over health-care services to First Nation communities, and the growing acceptance of traditional forms of healing, in improving the status of Aboriginal women’s mental health in Ontario.
- Support mental health programs that identify the strengths of Aboriginal families and communities and build on these strengths.
- Develop innovative depression treatments to respond to the complex socio-cultural context and the practical limitations of life in isolated northern communities.
- Detect those at high-risk for depression or self-harm and refer to culturally appropriate crisis intervention or prevention programs based in the community.
- Promote mental health through fostering coping skills for interpersonal crises, conflict resolution and a positive collective identity.
- Include representatives of all community members (youth, parents and extended family) in suicide prevention programs.
- Encourage communities to employ a combination of approaches including psychiatric, psychological, self-help groups, land-based camps and activities, and a revival of traditional teachings and spiritual beliefs.

**Women and Violence**

- Encourage health-care providers to ask questions about violence exposure if women present with depression (and assess for depression if women disclose violence).
- Identification of the depression should lead to appropriate, evidence-based treatments, which may assist women in resolving the violence in their lives, though there is little evidence regarding whether and how this happens.
- Services for depressed women, including primary health care, should focus on reducing the barriers to violence disclosure and help-seeking, including ensuring confidentiality, discussing with women the implications of mandatory reporting requirements for child abuse and gun shot wounds, and providing referral to available intimate partner violence-(IPV) specific services in the community, as appropriate.

**Homeless Women**

- Develop respite services to provide homeless women with an appropriate environment for recovery from depression after hospital discharge.
- Encourage policy initiatives aimed broadly toward reducing the risk of homelessness (e.g., increases in affordable housing and social assistance) which would also contribute to reduced rates of depression among homeless women.
- Develop education for health-care providers about the appropriate provision of mental health care to homeless individuals.
• Integrate service centres at which homeless women can receive physical and mental health care, and well as access social services, for themselves and their children.

• Implement services to facilitate acquiring and storing necessary identification (e.g., health cards) and support financial incentives for health care providers who treat depressed homeless individuals without proof of insurance status.

• Consider the provision of telephone or email services free of charge to enable homeless depressed women to maintain contact with their mental health-care providers and members of their support networks.

**Lone Mothers**

• Include income support, employment skills training and educational programs when appropriate in programs that alleviate depression in low SES lone mothers.

• Provide lone mothers with low SES equal access to utilization of these programs by providing a means of transportation, money for registration fees, and child-care arrangements.

• Develop policies aimed at intervention programs that improve child development aimed not specifically at lone-mother families, because the risk factors that predict increased rates of child morbidity, such as maternal depression, low-income, or low education, can occur in other types of families.

**Lesbians, Gay, Bisexual, Transgender and Transsexual Women (LGBTT)**

• Encourage social policies which ensure just treatment of LGBTT people, both at the interpersonal and institutional levels, to promote mental health for LGBTT women.

• Educate health-care providers, and particularly mental health-care providers, about provision of appropriate care to LGBTT people, including sensitive methods to encourage disclosure of sexual orientation.

• Increase accessibility of counselling services for this population, in order to address some of the psychosocial issues which often contribute to depression among LGBTT people (e.g., disclosure of sexual orientation, strained relationships with families of origin due to homophobic attitudes, experiences of violence related to homophobic discrimination).

• Establish LGBTT community health centres to provide holistic mental-and physical-health care of specific relevance to LGBTT people in areas with large LGBTT communities.

• Provide infrastructure to enable health networking among LGBTT-knowledgeable health-care providers across disciplines and across areas of the province in areas without large LGBTT communities.

**Socioeconomic Status**

• Consider the impact of lower SES on women’s mental health needs across the lifespan when developing programs for specific groups of women.

• Address the effect of lower SES on the ability to access antidepressant drugs, non-physician administered psychotherapy, and transportation costs to therapy.

• Promote comprehensive initiatives that combine health care services with social care and assistance, as opposed to managing them as separately.
**Comorbid Physical Illness**

- Develop collaborative, multidisciplinary care models, since the connection between depression and physical illness is likely biopsychosocial.
- Encourage the use of validated depression screening instruments to be used where depression treatment improves prognosis of physical illness.
- Ensure that women with comorbid physical illness are educated about the type, availability, and access to mental health services.
- Investigate the geographical availability of mental health services for medically ill women with depression in Ontario.

**Knowledge Gaps/Future Research**

Knowledge generated through high-quality research can be used as the basis for the development of programs, interventions and services geared towards women who suffer from, or are at high risk for, depression. The following items highlight the specific issues in the context of the Ontario health care system that need more attention from researchers and agencies that provide funding for research.

**General**

- Analyses using multi-stage, longitudinal, population-based data are needed to estimate 12-month and lifetime prevalence and incidence of depression among women in Ontario.
- Oversample women at higher risk for depression, especially women within special groups (i.e., ethnicity, LGBT, etc.) to determine prevalence, prevention, health care access and outcomes.
- Studies should examine the prevalence and incidence of depression among women across different birth cohorts.
- Link the prevalence of depression among women in Ontario to the availability and accessibility of mental health services by LHIN.
- Link the geographic distribution of prevalence and incidence estimates with information regarding the location of women at higher risk for depression (e.g., immigrants, aboriginal women, etc) so that mental health services can be targeted to these areas;
- Conduct research examining the predictors of the recurrence of a depressive episode for women in Ontario so that prevention, health promotion and treatment programs can be tailored to those at higher risk.
- Stratify the distribution of depression in the past year into those with first onset and those with recurrence since women in the latter group have a higher level of chronicity.
- Conduct comprehensive sex and gender-based research on the developmental trajectories and processes (from a life span perspective) to fully delineate the context of emergence of depression in diverse groups of women.
- Examine more recent data to assess the impact of unipolar depression on disability among men and women in Ontario including years lived with disability (YLD) and disability-adjusted life-years (DALYs).
• Studies aimed at monitoring health care reforms should use cost-effectiveness measures and gender-based analyses for all interventions (e.g., drug treatment, community based programs).
• Examine how the savings of psychiatric beds closure have been re-invested in community mental health services and their effectiveness.
• Examine the effect of psychiatric bed closure on increasing numbers of homeless women living on the street.
• Conduct research that examines proportions treated, health-care pathways, adequacy of screening and treatment delivery to improve mental health care for depressed women in Ontario.

ADOLESCENTS
• Determine the effectiveness of routine screening for depression among adolescent girls in primary care settings in Ontario.
• Determine the best methods of treatment of depression among girls and female adolescents.
• Assess mental health services acceptability, accessibility, availability and utilization for female adolescents and girls in Ontario.

PERINATAL
• Identify the best ways to prevent, detect and treat perinatal depression and understand possible effects on their children.
• Investigate the long-term effects on mood and cognition of antidepressant drugs on children exposed in utero or during breastfeeding.
• Determine if parenting interventions over time improve maternal psychosocial well-being and child outcomes.
• Encourage better understanding of infant temperament on maternal depression and the most effective interventions.

PERIMENOPAUSE
• Investigate the role of psychosocial and biologic (including hormonal) factors in depression in perimenopausal women. Such information might contribute to better prevention and treatment for women who become depressed at this stage of life.

IMMIGRANTS AND ETHNIC MINORITIES
• Investigate the preventative nature of ethnic identity toward depression.
• Determine whether or not traditional mental health practices of immigrant communities could work in a synergistic fashion with mainstream services.
• Encourage further investigation of mental health service utilization among immigrant women at different times after arrival in Canada to elucidate why overall service utilization appears lower among immigrants despite a possible greater need.
• Conduct a study and/or analyse prospective data that examines the mental health of several immigrant subgroups simultaneously, to identify those at greatest risk relative to other immigrants and Canadians. This will assist in developing better targeted prevention and interventions strategies.
ABORIGINAL

- Demonstrate the linkages between depression and life stressors or other social problems, such as family violence, sexual abuse etc.
- Evaluate and develop evidence-based data on community-based and culturally adapted projects that address depression or the broader scope of well-being.
- Elucidate the barriers to care and access to mental health services specific to Aboriginal women e.g. geographical, cultural, economical, human resources.
- Evaluate health-care approaches, including traditional forms of healing, as effective modalities in improving the status of Aboriginal women’s health in Ontario.

WOMEN AND VIOLENCE

- Investigate how best to help abused women suffering from depression in their help-seeking, and how best to provide resources and services to them.
- Develop and evaluate effective interventions for emotional abuse or exposure to family violence.
- Collect better evidence about the co-occurrence of depression and violence in women’s lives, their (combined) impact, and ways to address each and/or both.
- Collect better information on more distal determinants of depression that may have occurred in women’s lives, such as childhood difficulties, dating violence, marital discord, divorce, or other past events.
- Evaluate interventions for the primary prevention of maltreatment of girls in the Ontario context to prevent undertreatment and depression.

WOMEN WITH A HISTORY OF CHILD MALTREATMENT

- Include questions about childhood maltreatment experiences in clinical assessments of women experiencing depression. Given the high correlation between child maltreatment and depression, understanding the clinical history can assist in selecting appropriate therapeutic options.
- Fund research initiatives that test effective interventions to prevent depression among women who have experienced child maltreatment.

LONE MOTHERS

- Investigate the cause-effect relationship between higher prevalences of depression among lone mothers and their children’s developmental difficulties during and after marital transitions.
- Investigate lone mothers’ negative childhood or adolescent experiences as additional possible risk factors for depression.
- Determine the most appropriate mental health services for lone mothers.

HOMELESS WOMEN

- Conduct Ontario-based, multi-site research to more precisely estimate the prevalence of depression among both single homeless women and homeless women with children.
- Determine methods of service provision that will overcome the substantial barriers faced by depressed homeless women in accessing mental health care.
LESBIANS, GAY, BISEXUAL, TRANSGENDER AND TRANSSEXUAL WOMEN

- Encourage more appropriate and comprehensive data collection methods among LGBTTT people (i.e., develop questions in consultation with organizations such as the Canadian Rainbow Health Coalition and the Coalition for Lesbian and Gay Rights in Ontario) including epidemiological studies to estimate the prevalence of depression using structured diagnostic interviews.
- Allow for LGBTTT people to be over-sampled as necessary to allow for meaningful analyses of health status by sexual orientation, and to allow for desegregation of data by other relevant intersecting variables, including socio-economic status, age, race/ethnicity, violence, and health behaviours.
- Conduct studies to determine mental health service use and needs and an assessment of barriers to mental health care or satisfaction among disaggregated groups of LGBTTT women.

WORKING WOMEN

- Identify patterns of depression among different occupational groups and industrial sectors, with special attention to sex differences.
- Investigate the interplay of women’s domestic and occupational/professional spheres to attain a more ‘global’ picture of working women and depression (i.e., mediating/moderating variables between work-stress and depression).
- Encourage studies concerning the different types of interpersonal relationships in which women participate at work and leisure, and how these interact, in order to identify protective and risk factors for depression.
- Investigate the patterns of workplace absenteeism and disability related to depression.

LOWER SOCIO-ECONOMIC STATUS (SES)

- Identify a consistent measure of SES so that prevalence of depression among women with lower SES can be determined.
- Identify barriers to care for depressed women with lower SES so that they can be addressed.

COMORBID PHYSICAL ILLNESS

- Use data from large, prospective studies to elucidate the bidirectional nature of medical illness and depression in women and examine best strategies for prevention and improving outcomes.
PART TWO:
Epidemiology of Depression Among Women
Diagnosis of Depressive Disorders

Depressive disorders cover a spectrum of states from mild to severe illness that can be incapacitating and accompanied by suicidal and self-harm thoughts and actions. These disorders can be diagnosed using two major classification systems: the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM) (American Psychiatric Association, 1994) and the World Health Organization’s International Classification of Disease (ICD) (1992). Both systems use standardized criteria and have minor differences. The first type of disorder is major depressive disorder (MDD) which depends on the presence of a specific number of symptoms (Table 1.1) to define the severity, lasting at least two weeks with distress or disability and without features of other excluded physical and mental disorders. Dysthymia is used to diagnose a chronic or lifelong disorder with a minimum length of two years with milder severity symptoms of depression (Table 1.1).

Since many depressed individuals do not seek health care, community surveys have been developed to assist in estimating the prevalence and incidence of depression and to aid in screening. Self-administered instruments are the most common method of collecting this information since they are quick and easy to administer. These tools are symptom-oriented and each measure has its own scoring system with higher scores representing more severe symptoms. However, they may not capture the severity of depression very well (i.e., they do not address duration of symptoms, degree of impairment, and co-morbid psychiatric disorders), and the nature of the disorder complicates the measurement where those with severe depression are less likely to respond to questions and may be unable to communicate their feelings.

One of the most common self-report questionnaires used to estimate prevalence on a population level is the Composite International Diagnostic Interview (CIDI) and its short form for major depression (CIDI-SF-MD), which diagnoses major depression based on the criteria outlined in the DSM (Kessler, R. C. & Walters, E. E., 1998). Kessler et al (1998) developed and validated the short-form instrument and reported sensitivity and specificity estimates from 90 and 94 per cent. This instrument allows the collection of data on major depressive episodes that occurred in the past 12 months with respondents who reported a high number of symptoms being classified as having had an episode of major depression. Field trials of the full CIDI were also conducted by the World Health Organization (WHO) and were documented to have good reliability.
### Table 1.1: Classification of Depressive Disorders by DSM-IV and ICD-10
(adapted from Anderson, I. M., Nutt, D. J., & Deakin, J. F. W., 2000)

<table>
<thead>
<tr>
<th>Classification</th>
<th>DSM IV</th>
<th>ICD-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major depression</td>
<td>Major depressive episode • over last two weeks, five symptoms must be present most of the day or nearly every day • symptoms must cause clinically significant stress or impairment in functioning • symptoms not due to a physical/organic factor or illness</td>
<td>Depressive or recurrent depressive episode • can be severe, moderate or mild • with at least five symptoms</td>
</tr>
<tr>
<td>Milder depression</td>
<td>Depressive disorder (not otherwise specified) with at least four symptoms</td>
<td>Depressive episode (mild) with at least four symptoms</td>
</tr>
<tr>
<td>Dysthymia</td>
<td>Depressed mood for most of the day, for at least two years with the presence of two or more symptoms</td>
<td>Depressed mood for most of the day, for at least two years with the presence of two or more symptoms</td>
</tr>
</tbody>
</table>

**Symptoms**
- Depressed mood (loss of hopelessness, sadness)
- Loss of interest or pleasure in almost all activities
- Significant weight loss or gain (more than five per cent change in one month) or an increase or decrease in daily appetite
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Fatigue or loss of energy
- Feelings of worthlessness or excessive or inappropriate guilt
- Diminished ability to think or concentrate or indecisiveness
- Recurrent thoughts of death or suicidal ideation or a suicide attempt or a specific plan for committing suicide
### Table 1.2: Self Report Screening Measures for Depression for Children and Adolescents
(taken from Sharp, L. K. & Lipsky, M. S., 2002)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Age (yrs)</th>
<th>Reading level (grade)</th>
<th>No. of items</th>
<th>Time to complete (min)</th>
<th>Psychometric properties/cutoff</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Children and adolescents</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children’s Depression Inventory (CDI)</td>
<td>7–17</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>27</td>
<td>10–15</td>
<td>Alpha: 0.81; test-retest: 0.60 /above 19</td>
</tr>
<tr>
<td>Center for Epidemiological Studies-Depression Scale for Children (CES-DC)</td>
<td>12–18</td>
<td>6&lt;sup&gt;th&lt;/sup&gt;</td>
<td>20</td>
<td>5–10</td>
<td>Sensitivity: 71%; Specificity: 57% /above 14</td>
</tr>
<tr>
<td>Center for Epidemiological Studies-Depression Scale (CES-D)</td>
<td>≥14</td>
<td>6&lt;sup&gt;th&lt;/sup&gt;</td>
<td>20</td>
<td>5–10</td>
<td>Sensitivity: 84%; Specificity: 75% /above 15</td>
</tr>
<tr>
<td>Reynolds Child Depression Scale</td>
<td>8–12</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>30</td>
<td>10–15</td>
<td>Alpha: 0.87-0.91; test-retest: 0.80-0.93 /refer to manual</td>
</tr>
<tr>
<td>Reynolds Adolescent Depression Scale</td>
<td>13–18</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>30</td>
<td>10–15</td>
<td>Sensitivity: 84%; Specificity: 81% /above 15</td>
</tr>
<tr>
<td>Beck Depression Inventory (BDI)</td>
<td>≥14</td>
<td>6&lt;sup&gt;th&lt;/sup&gt;</td>
<td>21</td>
<td>5–10</td>
<td></td>
</tr>
</tbody>
</table>

### Table 1.3: Screening Measures for Depression for Adults and Elderly
(taken from Sharp, L. K., & Lipsky, M. S., 2002)

<table>
<thead>
<tr>
<th>Measure</th>
<th>No. of items</th>
<th>Time to complete (min)</th>
<th>Psychometric properties/cutoff</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adults</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beck Depression Inventory (BDI)</td>
<td>21</td>
<td>5–10</td>
<td>Sensitivity: 100%; Specificity: 89% /above 15</td>
</tr>
<tr>
<td>Beck Depression Inventory-II</td>
<td>21</td>
<td>5–10</td>
<td>Alpha: 0.92 /refer to manual</td>
</tr>
<tr>
<td>Beck Depression Inventory-PC (BDI-PC)</td>
<td>7</td>
<td>Fewer than 5</td>
<td>Sensitivity: 82%; Specificity: 92% /above 6</td>
</tr>
<tr>
<td>Center for Epidemiological Studies Depression (CES-D)</td>
<td>20</td>
<td>5–10</td>
<td>Sensitivity: 89%; Specificity: 70% /above 15</td>
</tr>
<tr>
<td>Edinburgh Postnatal Depression Scale</td>
<td>10</td>
<td>Fewer than 5</td>
<td>Alpha: 0.87; sensitivity: 85 to 86% /above 12</td>
</tr>
<tr>
<td>Zung Depression Rating Scale</td>
<td>20</td>
<td>5–10</td>
<td>Sensitivity: 97%; Specificity: 63% /above 49</td>
</tr>
</tbody>
</table>
Note: Clinician administered rating scales are seldom used in epidemiologic studies because of the time and expertise required, and are not included in these tables.

<table>
<thead>
<tr>
<th>Measure</th>
<th>No. of items</th>
<th>Time to complete (min)</th>
<th>Psychometric properties/cutoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elderly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beck Depression Inventory (BDI)</td>
<td>21</td>
<td>5–10</td>
<td>Alpha: 0.76 /above 15</td>
</tr>
<tr>
<td>Center for Epidemiological Studies Depression Scale (CES-D)</td>
<td>20</td>
<td>5–10</td>
<td>Sensitivity: 92%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Specificity: 87% /above 15</td>
</tr>
<tr>
<td>Cornell Scale for Depression in Dementia</td>
<td>19</td>
<td>10 with patient, 20 with caregiver</td>
<td>Sensitivity: 90%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Specificity: 75% /above 12</td>
</tr>
<tr>
<td>Geriatric Depression Scale (GDS)</td>
<td>30</td>
<td>10–15</td>
<td>Sensitivity: 80% Specificity: 100% /above 13</td>
</tr>
<tr>
<td>Geriatric Depression Scale-short</td>
<td>15</td>
<td>5–10</td>
<td>Sensitivity: 92 to 97%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Specificity: 55 to 81% /above 5</td>
</tr>
<tr>
<td>Zung Depression Rating Scale</td>
<td>20</td>
<td>5–10</td>
<td>Sensitivity: 97%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Specificity: 63% /above 49</td>
</tr>
</tbody>
</table>
CHAPTER 2: EPIDEMIOLOGY OF DEPRESSION

NATALIA DIAZ-GRAÑADOS

BACKGROUND

Unipolar depression is the leading cause of disease-related disability among women according to the World Health Organization’s Global Burden of Disease report (Murray, C. J. & Lopez, A. D., 1996). One of the most established findings in psychiatric epidemiology is the greater prevalence of depression in women, compared to men (Kessler, R. C., 2003; Wolk, S. I. & Weissman, M. M., 1995; Kessler, R. C. et al., 1994; Nolan-Hoeksema, S., 1987). There are gender differences in the rates of depression regardless of ethnicity or country of residence throughout the life stages, with the highest differences occurring between puberty and midlife narrowing during the senior years. Women have a higher risk of an initial, or first onset, episode of depression; resulting in a large pool of female subjects who can suffer a recurrence (Mazure, C. M., Keita, G. P., & Blehar, M. C., 2002). Lifetime prevalence of MDD in the US was estimated at approximately 21 per cent and 13 per cent for women and men, respectively. Lifetime prevalence of dysthymia (chronic mild depression) was estimated at eight per cent for women and five per cent for men with the same gender ratio as MDD (Kessler, R. C., & Walters, E. E., 1998).

There are also differences in the clinical features of depression. Women have an earlier age of onset, greater severity of illness and functional impairment, poorer social adjustment and quality of life (Kornstein, S. G. et al., 2000; McCullough, J. P. et al., 1996). Although no gender differences exist in the risk of recurrence of depression (Kessler, R. C. et al., 1994), women have more chronic and longer recurrent episodes compared to men (MacQueen, G., & Chokka, P., 2004). Women also present with a different profile of symptoms compared to men, reporting more anxiety, appetite disturbances and sleep changes than men (MacQueen, G., & Chokka, P., 2004; Kornstein, S. G. et al., 2000).

WHY DO SEX DIFFERENCES EXIST?

Although many studies were conducted to delineate the reasons for these sex differences, some have suggested that they are due to an artifact of diagnostic bias, psychosocial and/or biological factors. One reason suggests that women are more likely to report depressive symptoms, current and past, when consulting with a health-care provider. Women are socialized differently to men which may lead to greater vulnerability to depression. Women also tend to have more limitations and less choices than men, are more likely to have incomes below the poverty line, experience intimate partner violence, and live alone at older ages compared to men (Cobbs, E. L., & Ralapati, A. N., 1998); however, taken together, these factors cannot account for all sex differences. There are also important biological differences between men and women including sex hormones and differential cerebral reactions to stimuli. Genetic factors also play a role in susceptibility to depression. A recent meta-analysis found no substantial differences in the heritability of depression between the sexes (Sullivan, P. F., Neale, M. C., & Kendler, K. S., 2000) reporting similar odds ratios for depression in men and women (OR = 2.5 vs. 2.4, respectively). Most of the literature examining sex differences in the epidemiology, etiology, screening, diagnosis and treatment of depression has been conducted in non-Canadian samples.
Epidemiology of Depression in Canada

Depression affects five per cent of Canadians and approximately twice as many women than men across all age groups under 65 years (Stewart, D. E., Gucciardi, E., & Grace, S. L., 2004). The one-year prevalence in Ontario residents ranges from 4.3 per cent in 1990, using data from the Ontario Mental Health Supplement (Offord, D. R. et al., 1996) to 6.4 per cent in 2002, using data from the Canadian Community Health Survey (CCHS). The reported lifetime prevalence was estimated to be 10.9 per cent in 2002 (Kasman, N., & Ardal, S., 2005). Considering that there are over nine million Ontarians, the debilitating consequences of this disorder has a large impact on Ontario’s public health system. In order to implement new strategies on the prevention and treatment of depression among women in Ontario, we need to understand how depression differs between men and women, and identify those women at higher risk for depression. Below we describe one-year and lifetime prevalence estimates and incidence proportions that were extracted from existing publications that used Canadian data. This section aims to answer the following questions:

- What is the incidence and prevalence of depression among women in Ontario?
- How do these estimates compare to Canadian and international estimates?
- Who is at higher risk for depression in Ontario?

Results

From the literature search, 86 articles were considered eligible and a total of 65 did not meet the inclusion criteria. Studies were primarily excluded because they did not focus on women diagnosed with or reporting depression, did not stratify by sex or did not have an appropriate outcome.

We reported on studies that examined the prevalence or incidence of depression among women. There was one ‘good’ and three ‘fair’ meta-analyses, two ‘fair’ systematic reviews, and 11 Canadian primary articles met these criteria. For articles examining the epidemiology of depression among older women one ‘good’ and two ‘fair’ meta-analyses and one ‘poor’ systematic review were included.

The amount of Canadian and Ontario grey literature was vast; therefore, we only selected those reports that contained data not already published in journals. The sources of grey information came from agencies such as the Centre for Addictions and Mental Health, Canadian Institute for Health Information) and provincial and federal government sources (Statistics Canada, Ontario Ministry of Health and Long-Term Care (MOHLTC).

Epidemiology of Depression among Women

Sources of Epidemiologic Data for Canadian Women

The primary sources of data for epidemiologic studies administered surveys to subjects that were identified using multistage, stratified, random sampling drawn from a source representative of the Canadian/Ontarian population. There are several surveys that were conducted in Canada, most notably are the National Population Health Survey (NPHS), Canadian Community Health Survey (CCHS), and the Ontario Health Survey-Mental Health Supplement (OHS-MHS). Each of the study designs are briefly described in Table 2.1. (DesMeules, M. et al., 2004)
Most publications used NPHS data to estimate the prevalence and incidence of depression, while two reports used CCHS data. Even though public-user CCHS files were accessible to the investigative team for this literature review, estimates were not cited because the measures of depression available were estimates categorized by level of risk of having a current diagnosis of Major Depressive Episode (MDE), instead of the proportion of those reporting a MDE over 12 months or during their lifetime. Further analyses need be conducted to ensure accurate and reliable prevalence estimates of depression from this database.

Table 2.1: Description of Large, Epidemiological Canadian Studies that Examined Depression

<table>
<thead>
<tr>
<th>Survey</th>
<th>NPHS</th>
<th>CCHS</th>
<th>OHS-MHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research group/agency</td>
<td>Statistics Canada</td>
<td>Statistics Canada</td>
<td>Ontario Ministry of Health</td>
</tr>
<tr>
<td>Design and Sampling Frame</td>
<td>Multi-stage, stratified population-based survey One individual from each household was randomly selected. All ambulatory, Canadian residents were eligible except those living in the territories, on Indian reserves, or those on military bases</td>
<td>Multi-stage, stratified population-based survey One individual was randomly selected from each household across Canada not including the three territories, those on Indian Reserves and Crown Lands, residents of institutions, full-time members of the Canadian Armed Forces and residents living in remote areas.</td>
<td>Multi-stage, stratified population-based survey Individuals aged 15 or older were sampled from a household in Ontario (identified using Census data) who participated in the 2nd half of the OHS. Those excluded include the homeless, First Nations people on reserves, and non-ambulatory people.</td>
</tr>
<tr>
<td>Study sample</td>
<td>Men and women age 12 years or older</td>
<td>Men and women age 15 years or older</td>
<td>Men and women age 15 years or older</td>
</tr>
<tr>
<td>Data collection methods</td>
<td>1994/1995 were face-to-face interviews, other waves were telephone interviews; data were collected every two years</td>
<td>The Cycle 1.2 sample units selected from the area frame were interviewed using the Computer-Assisted Personal Interviewing (CAPI) method. Cycle 2.1 was conducted with both personal and telephone interviews.</td>
<td>Personal face to face interviews with interviewers completing the household questionnaire and respondents filling in a self-completed questionnaire</td>
</tr>
<tr>
<td>Measure of depression</td>
<td>CIDI-SF-MD</td>
<td>CIDI-SF-MD</td>
<td>UM-CIDI*</td>
</tr>
<tr>
<td>No. of women (Total), %(n)</td>
<td>1) 9,568</td>
<td>1.2) 20,211</td>
<td>54.6% (5438)</td>
</tr>
<tr>
<td>No. of women (Ontario), %(n)</td>
<td>1) 2,827</td>
<td>1.2) 7,137</td>
<td>54.6% (5438)</td>
</tr>
</tbody>
</table>

*CIDI-UM: Kessler, R and colleagues modified the CIDI to improve its efficiency and accuracy
Epidemiology of Depression among Ontarian Women

There were no meta-analyses or current primary articles that reported on the epidemiology of depression among women in Ontario. A well-cited published report that used data from the 1990 OHS-MHS reported a one-year prevalence of depression of 4.3 per cent for both men and women. CoFFmapred with men, women suffered more (one-year prevalence 5.4% vs. 2.8%, respectively), a trend that was also observed in other age groups (Offord, D. R. et al., 1996). De Marco et al (2000) examined a non-overlapping subgroup from the 1991 OHS from Metropolitan Toronto. The authors found a higher estimate of depression in this urban group reporting a one-year prevalence of 13.2 per cent among women compared to 7.4 per cent among men, and recurrence of 41.1 per cent in women and 36.5 per cent in men. A more recent population-based survey found the lifetime prevalence of depression to be 26.8 per cent among women (Frise, S., Steingart, A., Sloan, M., Cotterchio, M., & Kreiger, N., 2002). However, the prevalence of depression was not assessed using a validated questionnaire and their response rate was low (55%) introducing the potential for selection bias; therefore, these estimates must be used with caution.

Consistent with other publications, a recent analysis conducted by the Central East Health Information Partnership (CEHIP) using 2002 CCHS v.1.2 data, found the life-time prevalence to be significantly different between men (12%) and women (18%) (Kasman, N. & Ardal, S., 2005). The definition of depression used for this analysis was slightly modified to increase the sample size; therefore, the prevalence may be overestimated. Few studies have examined the prevalence of depressive disorders in Ontario and there is a paucity of information on the epidemiology of depressive disorders among Ontario women and how these estimates change according to age and geographical distribution. Consistent with other studies, a preliminary analysis conducted by the MOHLTC (2005) reports a 12 month prevalence of MDE of 6.1 per cent and 3.5 per cent and a lifetime prevalence 13.7 per cent and 8.2 per cent for Ontarian women and men, respectively (Table 2.2 and Table 2.3). They also found that women in younger age groups were more likely to suffer a major depressive episode than those in older age groups. Although depression was reported in terms of geographic region for each sex, the variability was too high to reliably make inferences on sex differences. In general, the North and East Ontario regions had the number of women reporting a MDE in the past year or during their lifetime. More analyses are needed to identify regional sex differences and how these link to the access and availability of mental health services. Also, it is not clear if these estimates include bipolar depression and whether they represent women reporting first onset of depressive episode or those with recurring episodes.

Epidemiology of Depression among Canadian Women

Most primary studies included in this review examined the epidemiology of depression at a national level. The most widely cited source of national data was the NPHS from all three waves (Stewart, D. E., Gucciardi, E., & Grace, S. L., 2004; Patten, S. B., 2001; Patten, S. B., 2000; Wade, T. J., & Cairney, J., 1997). However, the information from the CCHS and NPHS demonstrate that women were twice as likely to suffer from depression compared to men, across all age groups and these differences did not change over time (Table 2.4). The prevalence of depression among women was lower in the older age group (65 years or older) and increased in the younger groups (25 to 44 years). The proportion of new cases reporting depression in a two-year or four-year interval was also higher for women compared to men in
### Table 2.2: Prevalence of Major Depressive Episode in the Past 12 Months by Sex, Region and Age Group - 2002 Ontario - Population 15 and Older (source: MOHLTC)

<table>
<thead>
<tr>
<th>Health Region</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>South West</td>
<td>2.7E</td>
<td>5.8</td>
<td>4.3</td>
<td>16,300E</td>
<td>36,200</td>
<td>52,600</td>
</tr>
<tr>
<td>Central South</td>
<td>4.3E</td>
<td>4.7</td>
<td>4.5</td>
<td>19,600E</td>
<td>22,500</td>
<td>42,200</td>
</tr>
<tr>
<td>Central West</td>
<td>5.7E</td>
<td>7.0E</td>
<td>6.3</td>
<td>48,700E</td>
<td>61,900E</td>
<td>110,600</td>
</tr>
<tr>
<td>Central East</td>
<td>2.0E</td>
<td>5.3E</td>
<td>3.7</td>
<td>15,700E</td>
<td>44,000E</td>
<td>59,800</td>
</tr>
<tr>
<td>Toronto</td>
<td>3.0E</td>
<td>5.1</td>
<td>4.1</td>
<td>30,500E</td>
<td>56,200</td>
<td>86,600</td>
</tr>
<tr>
<td>East</td>
<td>2.8E</td>
<td>7.7</td>
<td>5.3</td>
<td>17,800E</td>
<td>51,300</td>
<td>69,100</td>
</tr>
<tr>
<td>North</td>
<td>4.5E</td>
<td>8.1</td>
<td>6.4</td>
<td>15,100E</td>
<td>27,700</td>
<td>42,800</td>
</tr>
<tr>
<td><strong>Ontario</strong></td>
<td>3.5</td>
<td>6.1</td>
<td>4.8</td>
<td>163,800</td>
<td>299,800</td>
<td>463,600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-24</td>
<td>4.2E</td>
<td>10.4</td>
<td>7.2</td>
<td>33,600E</td>
<td>80,400</td>
<td>114,000</td>
</tr>
<tr>
<td>25-44</td>
<td>3.6</td>
<td>6.6</td>
<td>5.1</td>
<td>68,200</td>
<td>125,400</td>
<td>193,600</td>
</tr>
<tr>
<td>45-64</td>
<td>3.7E</td>
<td>5.4</td>
<td>4.6</td>
<td>52,000E</td>
<td>78,700</td>
<td>130,700</td>
</tr>
<tr>
<td>65 and older</td>
<td>1.6E</td>
<td>1.9E</td>
<td>1.8</td>
<td>10,000E</td>
<td>15,300E</td>
<td>25,300</td>
</tr>
<tr>
<td><strong>Total – 15 and older</strong></td>
<td>3.5</td>
<td>6.1</td>
<td>4.8</td>
<td>163,800</td>
<td>299,800</td>
<td>463,600</td>
</tr>
</tbody>
</table>

*Source:* Canadian Community Health Survey - Mental Health and Well-Being Survey 2002 - Sharing File

*E Use with caution - high sampling variability*

### Table 2.3: Lifetime Prevalence of Major Depressive Episode by Sex, Region and Age Group - 2002 Ontario - Population 15 and Older (source: MOHLTC)

<table>
<thead>
<tr>
<th>Health Region</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>South West</td>
<td>7.3</td>
<td>14.9</td>
<td>11.2</td>
<td>44,100</td>
<td>93,000</td>
<td>137,100</td>
</tr>
<tr>
<td>Central South</td>
<td>9.9</td>
<td>13.9</td>
<td>11.9</td>
<td>45,300</td>
<td>66,500</td>
<td>111,800</td>
</tr>
<tr>
<td>Central West</td>
<td>11.9E</td>
<td>12.7</td>
<td>12.3</td>
<td>102,400E</td>
<td>112,100</td>
<td>214,400</td>
</tr>
<tr>
<td>Central East</td>
<td>5.4</td>
<td>13.5</td>
<td>9.5</td>
<td>43,000</td>
<td>111,300</td>
<td>154,300</td>
</tr>
<tr>
<td>Toronto</td>
<td>6.1</td>
<td>10.2</td>
<td>8.2</td>
<td>63,200</td>
<td>111,400</td>
<td>174,500</td>
</tr>
<tr>
<td>East</td>
<td>9.5</td>
<td>18.6</td>
<td>14.2</td>
<td>59,800</td>
<td>123,500</td>
<td>183,300</td>
</tr>
<tr>
<td>North</td>
<td>8.9E</td>
<td>15.3</td>
<td>12.1</td>
<td>29,600E</td>
<td>51,900</td>
<td>81,500</td>
</tr>
<tr>
<td><strong>Ontario</strong></td>
<td>8.2</td>
<td>13.7</td>
<td>11.0</td>
<td>387,300</td>
<td>669,700</td>
<td>1,056,900</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-24</td>
<td>6.4E</td>
<td>14.5</td>
<td>10.4</td>
<td>51,600E</td>
<td>111,500</td>
<td>163,100</td>
</tr>
<tr>
<td>25-44</td>
<td>9.1</td>
<td>15.1</td>
<td>12.1</td>
<td>172,400</td>
<td>284,800</td>
<td>457,100</td>
</tr>
<tr>
<td>45-64</td>
<td>9.8</td>
<td>15.3</td>
<td>12.6</td>
<td>136,900</td>
<td>221,400</td>
<td>358,300</td>
</tr>
<tr>
<td>65 and older</td>
<td>4.2E</td>
<td>6.5</td>
<td>5.5</td>
<td>26,400E</td>
<td>52,000</td>
<td>78,400</td>
</tr>
<tr>
<td><strong>Total – 15 and older</strong></td>
<td>8.2</td>
<td>13.7</td>
<td>11.0</td>
<td>387,300</td>
<td>669,700</td>
<td>1,056,900</td>
</tr>
</tbody>
</table>

*Source:* Canadian Community Health Survey - Mental Health and Well-Being Survey 2002 - Sharing File

*E Use with caution - high sampling variability*
Table 2.4: Prevalence and Incidence of Depression of Canadians Aged 25 or Older, from NPHS Data
(adapted from Statistics Canada, 1999)

<table>
<thead>
<tr>
<th>Survey</th>
<th>Year</th>
<th>Age</th>
<th>Women (12 Month)</th>
<th>Men (12 Month)</th>
<th>Women (Incidence)</th>
<th>Men (Incidence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCHS v1.2</td>
<td>2000/2001</td>
<td>All</td>
<td>5.5</td>
<td>3.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1998/1999</td>
<td>All</td>
<td>5.7</td>
<td>2.9</td>
<td>4-year</td>
<td>4-year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25–44</td>
<td>7.2</td>
<td>3.1</td>
<td>4.4</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45–64</td>
<td>4.9</td>
<td>2.7</td>
<td>3.2</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥65</td>
<td>2.5</td>
<td>1.8</td>
<td>1.6</td>
<td>-</td>
</tr>
<tr>
<td>NPHS</td>
<td>1996/1997</td>
<td>All</td>
<td>5.4</td>
<td>2.7</td>
<td>2-year</td>
<td>2-year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25–44</td>
<td>6.8</td>
<td>3.5</td>
<td>4.5</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45–64</td>
<td>5.0</td>
<td>2.6</td>
<td>4.1</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥65</td>
<td>1.6</td>
<td>1.7</td>
<td>1.3</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>1994/1995</td>
<td>All</td>
<td>7.1</td>
<td>3.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25–44</td>
<td>8.4</td>
<td>3.2</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td></td>
<td>45–64</td>
<td>6.1</td>
<td>3.2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥65</td>
<td>2.9</td>
<td>1.6</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Canadian Community Health Survey - Mental Health and Well-Being Survey 2002 - Sharing File

Use with caution - high sampling variability

A LITERATURE REVIEW ON DEPRESSION AMONG WOMEN: FOCUSING ON ONTARIO

Younger age groups, two-year incidence: 4.5 per cent for women compared to 3.3 per cent for men aged 25 to 44 years; 4-year incidence: 4.4 per cent for women compared to 2.2 per cent for men aged 25 to 44 years. The difference in incidence estimates between men and women narrowed in those aged 65 years or older. These one-year depression estimates for women are similar to those reported for Ontarian women across all age-groups.

Studies from other provinces consisted of samples from Edmonton, Alberta and Stirling County, in Atlantic Canada. A population-based study found that 11 per cent of Albertans aged 18 to 91 years old reported having a depressive episode in the past year (Patten, S. B., 2000). Like Ontario women, the prevalence of depression was more common among younger women (22 to 25 per cent for women aged 35 years or less compared to 11 to 18 per cent for those aged 35 or older) compared to men. (13% for men aged 35 years or less compared to 4 to 12% for those aged 35 or older) but estimates were higher (Patten, S. B., 2001). Spaner et al (1994) reports on estimates that closely resembled those reported for Ontarian women. The randomly selected sample from Edmonton had the same trends regarding age and gender differences in the prevalence of depression with one year depression estimates ranging from six per cent in women aged 65 or older to 14 per cent in those aged 25 to 44 years (Spaner, D., Bland, R. C., & Newman, S. C., 1994). Finally, a 'good' prospective cohort study conducted by Murphy and colleagues (2000) in Atlantic Canada reported lifetime and one month prevalence estimates for women (from their third cohort in 1992) similar to those found in Edmonton. Lifetime prevalence was 11 per cent for women and four per cent for men and one month (current) prevalence was 3.6 per cent for women compared to 1.5 per cent for men. The highest prevalence was reported for women aged less than 45 years (lifetime and current prevalence was 9.4 per cent and 3.7 per cent compared to 4.1 per cent and 0.9 per
cent in women aged 65 years or older) (Murphy, J. M., Laird, N. M., Monson, R. R., Sobol, A. M., & Leighton, A. H., 2000). These researchers also report overall incidence of 10 new women with MDE per 1,000 women aged 65 years or older compared to seven new men with MDE per 1,000 men aged 65 years or older (Murphy, J. M., Laird, N. M., Monson, R. R., Sobol, A. M., & Leighton, A. H., 2000).

### Epidemiology of Depression among Women –International Trends

The international literature examining the prevalence of depression has been growing rapidly providing a wealth of information from other countries. A large study, the European Study of The Epidemiology of Mental Disorders (ESEMeD/MHEDEA 2000) conducted from 2000 to 2002 across Europe (Germany, Spain, Italy, Belgium, Netherlands and France) administered the World Health Organization Mental Health Survey (a version of the CIDI) in an attempt to report on consistent, comparable rates across countries. They found the 12-month prevalence of depression to be five per cent among women and three per cent among men (Alonso, J. et al., 2004). Other European studies that reported one-year estimates of depression ranged from three per cent to 11 per cent for women and one per cent and five per cent for men with the lowest and highest proportions coming from German studies (Paykel, E. S., Brugha, T., & Fryers, T., 2005). In a ‘fair’ meta-analysis that pooled 12-month prevalence estimates from five European studies that used CIDI to measure depression, they found that men consistently had half the risk of MDE compared to women (Fryers, T. et al., 2004)

The National Comorbidity Study (NCS), a nationally representative, population-based study from the US estimated lifetime prevalence was 21 per cent and 13 per cent, and one-year prevalence was 13 per cent and eight per cent for women and men respectively (Kessler, R. C., McGonagle, K. A., Swartz, M., Blazer, D. G., & Nelson, C. B., 1993). The 2000-2002 ESEMeD one-year prevalence estimates were similar to those reported by the MOHLTC in 2005 and Offord et al in 1990 and the NCS estimates were similar to those reported by DeMarco et al (Toronto sample). This suggests that the prevalence of depression is higher in the U.S. and in more urban regions, whereas the overall prevalence in Ontario is similar to the estimates seen for the six countries in Europe. Direct comparisons between countries may be difficult since the use of different instruments can give different findings at symptom or case diagnosis levels in general populations. Differences in language and culture are also very important factors that may influence the rates coming from different countries. In contrast to the large number of studies that estimated prevalence, the number of studies examining annual episode rates and first episode incidence are limited and warrant further research.

### Risk Factors for Depression among Women

The etiology and predictors of depression need to be identified and understood so that the diagnosis, treatment and prevention of depression in women can be improved. Most research has focused on the predictors of a depressive episode and many factors have been consistently found including family history, childhood adversity, social isolation, and exposure to a stressful life experience. This review focuses primarily on the psychological and social factors that make women more vulnerable to depression compared to men. Those women belonging to special groups that are at higher risk for depression are reviewed in Part Three.
Older Age

Approximately 3.7 million (12%) Canadians are over the age of 65 years. This figure is expected to rise to five million (14%) by 2011 and to 18 per cent by 2025 (Martin-Matthews, A., 2002). Women 65 years or older are not inherently at greater risk of depression; in fact, studies show that prevalence and incidence estimates are lower among women in older age groups compared to those who are younger and that the gender difference in depression is lower. However, older depressed women have factors that differentiate them from those who are younger. They are more likely to have physical health problems and become caregivers for older relatives or partners, particularly those with dementia (Pinquart, M. & Sorensen, S., 2004). Depression may also be a result of direct physiological changes, side effects of medications, pain or functional impairments.

Recognition of depression may be difficult for health-care providers since it may be difficult to distinguish depressive symptoms from those consistent with other health problems, especially cognitive decline or cardiovascular disease. This may result in under detection and undertreatment of depression in older women (Lebowitz, B. D., 1997). Cole et al (2003) conducted a “fair” meta-analysis of seven studies and found that female gender was a significant risk factor for depression (pooled odds ratio (95% Confidence Interval), pooled OR (95% CI) = 1.4(1.2 - 1.8)). A “good” meta-analysis and “fair” systematic review concluded that depression in the elderly community and primary care subjects had a poor prognosis (Saz, P. & Dewey, M. E., 2001; Cole, M. G., Bellavance, F., & Mansour, A., 1999) and they probably suffered from chronic depression, experienced relapses, and were undertreated (Cole, M. G., Bellavance, F., & Mansour, A., 1999). The treatment of older women may also be complicated by the physiological changes associated with older age such as structural brain changes or cognitive impairment.

Limitations to Prevalence and Incidence Estimates of Depressive Disorders

The prevalence of depression has increased over the last few decades. Prevalence data is of limited usefulness in studies of etiology because prevalence is affected by mortality and episode duration (Patten, S. B., 2003). Moreover, some have suggested that the higher prevalence estimates of depression are overestimated since recall failure and reluctance to admit depression might increase with age; however, this is inconsistent with many longitudinal surveys. Incidence estimates may be overestimated since those with a lifetime prevalence of depression cannot be removed from many surveys; therefore, few studies exist that examine the incidence of depression and how incidence trends change over time for different birth cohorts.

Knowledge Gaps

- Analyses using multi-stage, longitudinal, population-based data are needed to estimate 12-month and lifetime prevalence and incidence of depression among women in Ontario.
- More studies that examine women at higher risk for depression, especially women within special groups (i.e., ethnicity, LGBTTT, etc.) are needed. These women should be over-sampled so that proper analyses can be conducted.
• There is a paucity in information regarding how female depression estimates change over time and more research is needed to examine the estimates of depression among women across different birth cohorts.

• The severity and duration of depression among women in Ontario LHINs needs to be examined and this information should be linked to the availability and accessability of mental health services by geographic region and health network.

• The geographic distribution of prevalence and incidence estimates must be linked with information regarding the location of women at higher risk for depression (e.g., immigrants, aboriginal women, etc) so that mental health services can be targeted to these areas.

• Research examining the predictors of the recurrence of a depressive episode for women in Ontario needs to be conducted so that prevention and health promotion programs can be tailored to those at higher risk.

• The distribution of depression in the past year needs to be stratified into those with first onset and those with recurrence since women in the latter group have a higher level of risk.

**Implications for Policy-makers and Health-Care Providers**

• The current health-care system may impose barriers (i.e., accessibility, availability) on the treatment of depression that do not exist for other physical disorders.

• Health-care systems differ between countries; therefore, evidence regarding mental health service programs in these countries may not be generalized to the Ontario population;

• Education programs aimed at primary care providers to screen and treat those at higher risk for depression need to be implemented

• Research that examines proportions treated, health care pathways, adequacy of screening and treatment delivery is needed to improve mental health care for depressed women in Ontario.
Table 2.5: Characteristics of Included Review Articles – Epidemiology of Depression among Women

<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Type</th>
<th>Age, yrs Range, Mean</th>
<th># of Studies</th>
<th>Description</th>
<th>Mean, Min-Max</th>
<th>Conclusion</th>
<th>Overall Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meta-Analysis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cole, MG 1999, Canada</td>
<td>Meta-Analysis</td>
<td>60–94, NR</td>
<td>Prospect-12</td>
<td>Prognosis of depression in elderly primary care patients and community residents</td>
<td>32.7% 17–47%</td>
<td>Depression in elderly community and primary care populations has a poor prognosis, is possibly chronic or relapsing or both and is probably under-treated</td>
<td>Good</td>
</tr>
<tr>
<td>Cole, MG 2003, Canada</td>
<td>Meta-Analysis</td>
<td>50–103, NR</td>
<td>Prospect-20</td>
<td>Odds ratio of depression among elderly females Prevalence of incident depression among both genders</td>
<td>1.4 0.4–14.9</td>
<td>Gender (female) is significant risk factor for depression in the elderly</td>
<td>Fair</td>
</tr>
<tr>
<td></td>
<td>Systematic Review</td>
<td>0–65, NR</td>
<td>NR-110</td>
<td>Prevalence of depressive disorders in females</td>
<td>30% 21–69%</td>
<td>Adult women are more likely to be hospitalized for a depressive disorder</td>
<td>Fair</td>
</tr>
</tbody>
</table>

Abbreviations: NR – Not Reported
Prospect – Prospective Cohort
<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Sample Recruitment, Instrument</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>de Marco, RR 2000, Canada</td>
<td>Cross-sectional: Probability Sample Toronto, Ontario</td>
<td>18–55, NR</td>
<td>676</td>
<td>CIDI</td>
<td>13.2-One-year prevalence of major depression in Metropolitan Toronto women 41.2-Recurrence of major depression in Metropolitan Toronto women</td>
<td>Fair</td>
</tr>
</tbody>
</table>
## Table 2.6: Characteristics of Included Primary Articles – Epidemiology of Depression among Women

<table>
<thead>
<tr>
<th>Author</th>
<th>Year, Country</th>
<th>Study Sample Recruitment, Instrument</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaner, D</td>
<td>1994, Canada</td>
<td>Cross-sectional: Population-based</td>
<td>18–65+, NR</td>
<td>1,928</td>
<td>DIS</td>
<td>11.4-Lifetime prevalence of major depressive disorder in women 3.9-Six-month prevalence of major depressive disorder in women</td>
<td>Fair</td>
</tr>
</tbody>
</table>

Abbreviations: DIS – Diagnostic Interview Schedule  
DSM-IV - Diagnostic and Statistical Manual of Mental Disorders - Fourth Edition  
NR – Not Reported  
NPHS – National Population Health Survey  
OHS – Ontario Health Survey  
UM-CIDI-SFMD – (University of Michigan–)Composite International Diagnostic Interview(-Short Form Major Depression)
Given the high prevalence of depression in women, the emotional and financial burden on individuals, on family members and on society as a whole, the impact is expected to be vast. The economic impact of depression can be quantified as indirect (external) – morbidity and mortality costs in terms of loss of productivity, increased disability, loss of lives – and direct (internal) – treatment and service fees/payments, public health system costs.

**Morbidity**

Until recently, outcomes research was mainly limited to counting deaths and this was the chief way to determine the priorities for public health actions and to control whether public health programs were succeeding. Mental disorders were never ranked as one of the top ten public health priorities when only mortality indicators were used. An assessment of both fatal, and non-fatal, outcomes has increased the recognition that depressive disorders have become an important public health issue over the past few decades. The Global Burden of Disease Study conducted by the World Health Organization (WHO) ranked unipolar depression as the fourth leading cause of burden among all diseases (Ustun, T. B., yuso-Mateos, J. L., Chatterji, S., Mathers, C., & Murray, C. J. L., 2004) and projected it to be the second leading cause of disease burden in developed countries by the year 2020 (World Health Organization, 2000). By combining the mortality and disability effects of disease into one unit, the disability-adjusted life years (DALYs), the magnitude of the burden of depressive disorders on public health has become apparent. Globally, depression accounted for a total of 4.4 per cent DALYs in the year 2000, affecting more women than men (5.7% vs. 3.5%, respectively) (World Health Organization, 2004), and caused the largest amount of non-fatal burden, accounting for 12 per cent of total years lived with disability. (Ustun, T. B., yuso-Mateos, J. L., Chatterji, S., Mathers, C., & Murray, C. J. L., 2004) For women aged 15 to 44 years, unipolar depression was the leading cause of years of life lived with disability (YLDs) accounting for 18.6 per cent YLDs compared to 13.9 per cent for men within the same age range (World Health Organization, 2004).

The Ontario Women’s Health Status report used data from the OHS-OMS to examine the burden of mental illness. The report found a higher proportion of disability in main activity among younger women (26% age 15 to 19 years) compared to older women (11 to 15% for ages 20 or greater) and men (2 to 37% for ages 15 or older). There was a higher proportion of disability among men compared to women in the younger age group, which may be due to a higher prevalence of other types of mental illnesses such as anti-social personality disorder, conduct disorders and substance abuse among men compared to women.. (Stewart, D. E. et al., 2002) This reported disability translated into 0.6 to 3.4 disability days for women and 0.1 to 1.1 disability days for men. Disability days refer to days when the respondent was totally unable to carry out their normal activities within a month owing to their mental illness. (Stewart, D. E. et al., 2002) Future research needs to examine more recent data to assess the impact of unipolar depression on disability among men and women in Ontario.
MORTALITY

In Canada, approximately 4,000 individuals committed suicide in 1996, with 25 per cent occurring among Ontarian residents (Stewart, D. E. et al., 2002). Approximately 15 to 20 per cent of depressive patients end their lives by committing suicide, a common and often avoidable outcome of this illness. (Goodwin, F. K., & Jamison, K. R., 1990). People with major depressive disorder are at highest risk of suicide where 40 per cent to 60 per cent of completed suicides involve patients with depression compared to all of the psychiatric conditions (Reesal, R. T. & Lam, R. W., 2001), therefore, these patients should be regularly assessed for suicide. A ‘fair’ systematic review that included 20 studies on suicide concluded that depression results in a higher risk of death (Wulsin, L. R., Vaillant, G. E., & Wells, V. E., 1999). In particular, they show that Murphy, et al, found the mortality ratio to be 2.1 for men and 1.2 for women in the 1987 Stirling County cohort. Cuijpers et al (2002) conducted a ‘fair’ meta-analysis on 25 studies published from 1984 to 2000 that examined the relationship between depression and all-cause mortality. The meta-analysis reported an overall relative risk relative risk of 1.8 (95% CI = 1.6 – 2.1) of dying among depressed subjects. Only 12 of the studies reviewed stratified their results by sex; and the overall relative risk of dying was slightly higher for men (2.3, 95% CI = 1.9 – 2.7) than women (1.6, 95% CI = 1.4 – 2.9), although not statistically significant (Cuijpers, P., & Smit, F., 2002). However, another report from the Canadian Institute of Health Information (2003) found that Canadian men were four times more likely to commit suicide than women.

Although the rate of fatalities is higher among men, suicide attempts are much more common than completed suicides and more prevalent among women. Adult women reported a higher lifetime prevalence of attempted suicide compared to men, 4.2 per cent and 1.5 per cent respectively in the Epidemiologic Catchment Area Study, a population-based study conducted in the U.S. (Moscicki, E. K., 1994). In Canada, women are three to four times more likely to attempt suicide than men (Centre for Addiction and Mental Health, 2002). A study from Edmonton that assessed emergency room admissions following a suicide attempt found that 61 per cent of persons attempting suicide were women. The disparity between the sexes was larger in those in younger age groups (3.5 to 1 female to male ratio among those aged 15 years or younger) compared to other age groups (Bland, R. C., Dyck, R. J., Newman, S. C., & Orn, H., 1998). Similarly, analyses using data from the CCHS found that suicidal thoughts among Canadians aged 15 years or older was 3.7 per cent; a higher disparity between the sexes was found among those aged 15 to 24 years with 7.3 per cent of women reporting these thoughts compared to 4.7 per cent men. There are relatively little differences between the genders across all other age groups (Statistics Canada, 2002). The pattern of suicide attempts is also different for men and women, women are more likely to attempt suicide in the later part of their depressive episode and are more likely to overdose on medications, whereas men attempt suicide early in an episode and are more likely to have violent self-injurious behaviours (e.g., shooting and hanging) (Stewart, D. E. et al., 2002; Canadian Mental Health Association, 2001).

OVERVIEW

Since health is one of the largest components of government spending, major initiatives to re-examine health priorities and downsize budgets have been undertaken by examining existing health-care policies. The components of health-care policy include advocacy, promotion,
prevention, treatment and rehabilitation. Although each province and territory has to meet the minimum standards set out by the federal government, they each have their own mental health policy. Healthcare in Ontario is based on universal access and is largely a single-payer system; as such, all legal residents regardless of health or employment status are eligible for the provincial plan. At the provincial level, mental health services are provided to Ontarians through family physicians, psychiatrists, allied health professionals (e.g., psychologists, social workers, psychiatric nurses, clinical nurse specialists, Employee Assistance Programs (EAPs)), general hospitals, specialty hospitals (four of which are in Ontario: Centre for Addiction and Mental Health, the Royal Ottawa Care Group, North East Mental Health Centre and Homewood a for-profit facility), psychiatric hospitals (e.g., Penetanguishene Mental Health Centre, Whitby Mental Health Centre, North Bay Psychiatric Hospital and Lakehead Psychiatric Hospital), and community mental health programs (Canadian Mental Health Association, 2004)

There are 335 community mental health programs which encompass housing services, case management, mobile crisis services, among others. These programs have contributed to reducing hospitalizations by 86 per cent and improved client outcomes. A recent report from the Community Assessment Project from the Hamilton, Niagara and Halton region found that 56 per cent of those using these services were female and 64 per cent of all users suffered from mood disorders (Health Systems Research and Consulting Unit, 2002). The government of Ontario has budgeted for the expansion of these programs by increasing access to the different services provided, through increased funding from $463 million in 2004-05 to $583 million in 2007-08 (Ministry of Finance, 2004). The Mood Disorders Association of Ontario lists a number of clinics and community programs directed at treating depression in adults such as Talking About Mental Illness (TAMI). TAMI is a program developed in 1998 by the Mood Disorders Association of Ontario (2005) to develop and deliver awareness in different communities across the province of Ontario.

Knowledge Gaps

- Future research needs to examine more recent data to assess the impact of unipolar depression on disability among men and women in Ontario
- Studies aimed at monitoring health-care reforms should use cost-effectiveness measures for all interventions (e.g., drug treatment, community based programs), and use gender-based analysis
- More gender-based analyses examining the extent of disability caused by depression and the cost to society are needed
- More studies examining health care accessibility and utilization stratified by region, age and sex should be conducted in Ontario
- Studies that examine the burden of depression as YLD and DALYs among men and women in Ontario are needed
- Studies that examine how much of the savings of closure of psychiatric beds has been re-invested in community mental health services and their effectiveness.
- Studies that examine the effect of psychiatric bed closure on increasing numbers of depressed homeless women living on the street.
Implications for Policy-makers and Health-care Providers

- Public education and special depression management programmes for women that enhance early and effective treatment and relapse prevention.

- There is a need to develop and adapt interventions for reducing the disability associated with depression (Ustun, T. B., yuso-Mateos, J. L., Chatterji, S., Mathers, C., & Murray, C. J. L., 2004).

- To reduce the burden, effective strategies need to be found to shorten the length of episodes and to prevent recurrence in at-risk populations.

- There is a need to integrate the screening and treatment of depression into primary care services.

- More studies are needed in care-pathways, adequacy of recognition and treatment delivery.

- Mental health indicators focused on examining depression should be gender-sensitive.
### Table 3.1: Characteristics of Included Review Articles – Suicide among Women

<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Type</th>
<th>Age, yrs Range, Mean</th>
<th># of Studies</th>
<th>Description</th>
<th>Mean, Min-Max</th>
<th>Conclusion</th>
<th>Overall Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meta-Analysis</strong></td>
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<tr>
<td>Cuijpers, P 2002, Netherlands</td>
<td>Meta-Analysis</td>
<td>16–85</td>
<td>Cross-Sect-25</td>
<td>Relative risk of mortality in depressed vs. non-depressed subjects</td>
<td>1.81 1.58-2.07</td>
<td>Depressed subjects have an increased risk of mortality</td>
<td>Fair</td>
</tr>
<tr>
<td>Saz, P 2001, Canada</td>
<td>Meta-Analysis</td>
<td>60–85</td>
<td>Prospect-21</td>
<td>Odds ratio of mortality with depression</td>
<td>1.73 1.53-1.95</td>
<td>Diagnosed depression in community-resident older people is associated with increased mortality</td>
<td>Fair</td>
</tr>
<tr>
<td><strong>Systematic Review</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Wulsin, LR 1999, US</td>
<td>Systematic Review</td>
<td>NR</td>
<td>Prospect-57</td>
<td>Rates of suicide as a percentage of deaths among depressed</td>
<td>10.8% 0-64%</td>
<td>Depression substantially increases the risk of early death</td>
<td>Fair</td>
</tr>
</tbody>
</table>

**Abbreviations:**
- Cross-Sect – Cross-sectional
- NR – Not Reported
- Prospect – Prospective Cohort
PART THREE:
GROUPS OF WOMEN MOST AT RISK FOR DEPRESSION
CHAPTER 4: LIFE STAGE – ADOLESCENCE

RIMA AZAR

BACKGROUND

According to the Canadian Population Health Initiative (2005), adolescents aged 12 to 19 constitute about 11 per cent of Canada’s population. About 49 per cent of Canadian teenagers are girls (Canadian Institute of Health Information: Canadian Population Health Initiative, 2005). In Ontario, adolescent girls comprise almost six per cent of the total population (Cohen, M.M., 2002). Adolescence is a time of dramatic and rapid physical, psychological, and social changes. Although challenging, adolescence is enjoyable for the majority of girls. However, for some adolescent girls, this critical period of transition to adulthood is unhappy and unhealthy (Tipper, J., 2005). Adolescent girls are more likely to be depressed, report sadness, and low self-esteem, than boys (Cohen, M.M., 2002). The aim of this section is to address two key questions:

• What is the prevalence of depression in adolescent girls in Ontario and how it compares to other estimates across Canada and in other countries?

• What are the actual or perceived barriers to depression treatment and prevention during adolescence?

RESULTS

Among the 52 studies pulled for this systematic review, 50 did not meet the inclusion criteria for any of the two key questions and were therefore excluded. The excluded studies were 27 systematic reviews and/or meta-analyses, four reviews of the literature, 17 Canadian primary studies, a recent update to the Canadian Task Force on Preventive Health Care, and one qualitative participatory study. In most of the excluded studies, prevalence was not stratified by sex. Only two Canadian primary papers were eligible because they could provide estimates on depression in adolescent girls in Ontario and/or Canada (Beaudet, M. P., 1999; Fleming, J. E., Boyle, M. H., & Offord, D. R., 1993) and were assessed as being of good quality. These studies were: a longitudinal community-based study (Fleming, J. E., Boyle, M. H., & Offord, D. R., 1993) and one reporting data from the National Population Health Survey (NPHS) (Beaudet, M. P., 1999). See Table 4.1 for study summaries.

In the paragraphs below, data extracted will be reported from the two included studies and from the grey literature (Adlaf, E. M., Paglia-Boak, A., Beitchman, J. H., & Wolfe, D., 2004). Adlaf et al report findings from the Student Drug Use Survey or OSDUS.

EPIDEMIOLOGY OF DEPRESSION AMONG ADOLESCENT GIRLS

Data extracted from the eligible articles (Statistics Canada, 1999; Fleming, J. E., Boyle, M. H., & Offord, D. R., 1993) are used to provide estimates of the prevalence of depression in adolescent girls. The Ontario prevalence estimates will be compared with Canadian data as well as data from Great Britain and the United States since these two countries are quite similar in terms of social and economic contexts (Wade, T. J., Cairney, J., & Pevalin, D. J., 2002).
Statistics Canada (1999) reported depression data from the NPHS. In this survey, depression was measured with a subset of questions from the Composite International Diagnostic Interview (DSM-III-R criteria). In Fleming et al.'s study (1993), major depression was assessed according to the DSM-III criteria. In Ontario, the prevalence of depression in 13 to 16 years-old adolescent girls (data collected in 1983) is 7.9 per cent in comparison to 5.0 per cent in adolescent boys. In Canada (data collected in 1994/1995 excluding territories), 12 to 14 years-old adolescent girls have a two-year incidence of depressive episode of 7.9 per cent (95% CI = 4.8-10.9) and a four-year incidence of depressive episode of 7.2 per cent (95% CI = 3.8-10.6) whereas 15 to 19 years-old adolescent girls have a two-year incidence of depression of 5.1 per cent (95% CI = 2.9-7.3) and a four-year incidence of 8.4 per cent (95% CI = 7.2-8.4) (Statistics Canada, 1999). Data from American and British national studies (Wade, T. J., Cairney, J., & Pevalin, D. J., 2002) show that, in these two countries, adolescent girls are twice as likely as boys to score in the top decile of depression scores and to have significantly higher depressive levels.

Clinical Characteristics of Adolescent Depression: Is it Unique or Does it Compare to Depression in Adulthood?

Depression in adolescent girls is considered as an internalizing problem that can take a tremendous toll on development during a crucial period, with impairments in psychosocial functioning, interpersonal relationships, and declines in school performance (Ryan, E. P., & Redding, R. E., 2004). Hopelessness, helplessness, and feelings of low self-esteem are important symptoms of depression in adolescence. Cognitive components of depression in adolescence (i.e., negative self-cognition, perception of lack of control) have been generally consistent with those identified in the adult literature (Cicchetti, D., & Toth, S. L., 1998). Furthermore, an episode of major depression puts an adolescent girl at greater risk for depression in adulthood (Statistics Canada, 1999). Indeed, depressive episodes among adolescent girls are often precursors to continued episodes of major depression, bipolar disorder, and also to other affective disorders in adulthood (Ryan, E. P., & Redding, R. E., 2004).

Risk Factors for Depression among Adolescent Girls

Developmental Psychopathology Approach to Depression in Adolescence

Depression in adolescent girls involves an interplay of psychological (e.g. cognitive, affective, socio-emotional), social (e.g. dating violence), and biological (e.g. genetic, puberty, neuroendocrine) components. Furthermore, depression seems to show significant continuity from childhood into adult life (Harrington, R., 2001). As highlighted by Cicchetti and Toth (1998), there are diverse pathways to depressive disorders in adolescence (like major depression); this is due to the substantial variability in the course of development and psychopathology. Therefore, it is essential to take an integrated developmental biopsychosocial approach to risk factors for adolescent depression and for other forms of psychopathology (Cicchetti, D., & Toth, S. L., 1998). Such an approach will help researchers fully understand the developmental processes underlying the emergence of depressive disorders in adolescent girls.
Depression in the Context of Sex and Gender Development

Puberty or Early Puberty: the Effects of Hormone Levels and Sexual Maturation on Depression?

Child and adolescent epidemiological studies generally agree that before puberty the rates of depression are similar in girls and boys (Angold, A., Costella, E. J., & Worthman, C. M., 1998; Cicchetti, D., & Toth, S. L., 1998). A meta-analysis by Twenge and Nolen-Hoeksema (2002) showed that the timing of the emergence of gender differences in the prevalence of depressive symptoms is unclear. However, it seems that rates of depression in girls begin to rise somewhere between late childhood and age 15 (Angold, A., Costella, E. J., & Worthman, C. M., 1998). In a cross-national examination of the emergence of the gender gap in depression, Wolfe et al. (2001) found that gender differences in the prevalence of depression across Canada, Great Britain and the United States emerged by age 14, regardless of type of measurement (both diagnostic instruments and categorical cut points of depression scales).

The timing of the beginning of sex differences in depression is very important in biological theories that argue for a link between puberty and depression (Twenge, J. M. & Nolen-Hoeksema, S., 2002; Angold, A., Costella, E. J., & Worthman, C. M., 1998). In these theories, the question is: Do biological factors inherent in puberty account, at least partly, for the increase of depression rate in girls compared to boys? In addressing this question, one must bear in mind that there are substantial differences between girls in the timing of puberty. This inter-individual difference is due to the influence of heredity (up to 50 to 80 per cent of the variance is genetically controlled), to internal and external factors like metabolism, nutrition, level of exercise, and levels of stress (Delemarre-Van de Waal, H. A., 2005; Ebling, F. J., 2005).

At puberty, the direct effects of hormone changes may occur prior to the appearance of secondary sexual characteristics (Susman, E., & Pajer, K., 2004). All adolescent girls are faced by the challenging developmental tasks of adolescence. Examples of these tasks are adjustment to the changes in body image, self-concept, family, and peer status accompanying the onset of menstruation. In early maturing adolescent girls, the effects of hormonal changes can occur two to three years before they are anticipated by parents, teachers, and peers (Susman, E., & Pajer, K., 2004). Thus, adolescent tasks can be even more challenging for early maturing girls. Indeed, Angold et al (1998) observed that Tanner stages (scales for stages for sexual development during puberty) seem to be more related to the prevalence of depression than is age. In addition, early menarche (onset of menstruation) may even trigger higher levels of depression (Angold, A., Costella, E. J., & Worthman, C. M., 1998). In the same vein, Rierdan (1998) reports findings of an association between very early menarche timing (before a mean age of 12.8 in the United States) and depressive symptoms while showing no link between menarche and depressive symptoms.

Gender Differences - Behavioural Style Prior to Puberty, Family Influences and Socialization during Adolescence

Another alternative to theories on biological changes associated with puberty is the role of risk factors in socialization or behavioral development prior to puberty (Cicchetti, D. & Toth, S. L., 1998). Gender differences predisposing to depression may be due to personality or behavioral
styles that existed before adolescence. For instance, compared to boys, girls may be more prone to rumination, which is a tendency to be preoccupied with negative thoughts (Cicchetti, D., & Toth, S. L., 1998). These differences may interact with the developmental challenges of adolescence for girls and may lead to a greater rate of depression. In addition, other risk factors can contribute to the emergence of gender differences in the prevalence of depression in adolescent girls such as family influences, social changes like school transition and family’s socio-economic status (Twenge, J. M., & Nolen-Hoeksema, S., 2002).

While associated with externalizing problems (like conduct disorder), family risk factors have been consistently shown to be associated with the onset of depression (Diamond, G. S., Serrano, A. C., Dickey, M., & Sonis, W. A., 1996). Examples of family risk factors for depression are parental inefficiency, poor parent-child attachment as well as neglect, and hostility. It is interesting to note that a history of maltreatment in girls is a pervasive risk factor for becoming recipients of violence (ie. dating violence).

In turn, dating violence can contribute to feelings of distress and depressive symptoms as well as delinquent behavior, especially in adolescent girls (Wolfe, D. A., Scott, K., Wekerle, C., & Pittman, A. L., 2001). As reported by Cicchetti and Toth (1998), clinically depressed adolescents have been found to express less secure attachment to their parents and difficulties in forming an opposite-sex relationship. As far as gay adolescent girls are concerned, conflicts may arise in their lives as they become aware of their sexual orientation. Consequently, gay adolescents are at increased risk of suffering from life stressors, stigmatization and isolation (Radkowsky, M. & Siegel, L. J., 1997). According to data from the Association of Gay and Lesbian Psychiatrists (Fieldman, M. J., 2002), lesbian (as well as gay and bisexual) teens are up to six times more likely to suffer from depression or have substance use problem.

Another family risk factor for depression is divorce of the parents. Adolescent girls from single-parent families and those from divorced parents show increased levels of depression and slower rates of recovery from a depressive episode (Cicchetti, D. & Toth, S. L., 1998). In Canada, about 16 per cent of youth live with single mothers and four per cent with single fathers (Canadian Institute of Health Information: Canadian Population Health Initiative, 2005). In addition, adolescent girls (and boys) of parents with depressive disorders are considered at risk (whether genetic or not) (Diamond, G. S., Serrano, A. C., Dickey, M., & Sonis, W. A., 1996). Despite this risk, not all teenage girls of depressed parents will develop depressive disorder (Cicchetti, D., & Toth, S. L., 1998). More research is needed to better understand resiliency from depression, as well as the mechanisms that may contribute to this intergenerational transmission of risk for depression.

Finally, as stated by Twenge and Nolen-Hoeksema (2002), although adolescent mental health is embedded not only in the context of family but also of community and society, very few studies examined the link between depression in adolescent girls and factors like SES and ethnicity. In this regard, one large American study by Roberts et al. (1997) indicated that adolescents who reported that their SES was somewhat, or much worse than their peers had a higher prevalence of depression. In the Canadian literature (Ross, E., Ali, A., & Toner, B., 2003), adolescent girls expressed distress at being unable to meet their parents' high expectation. Interestingly, this issue was more complicated for girls born to Canadian immigrants who reported being torn when conflicts between Canadian values and those of the home country are present.
Comorbidities and Shared Risk Factors
Approximately 40 per cent to 70 per cent of depressed adolescent girls (and boys) develop an additional comorbid disorder, and 20 per cent to 50 per cent of these are estimated to have at least two comorbid diagnoses (Cicchetti, D. & Toth, S. L., 1998). Anxiety disorder is often associated with depression. Using data from the National Longitudinal Survey of Children and Youth (NLSCY) by Statistics Canada, Bushnik (2005) reports that significantly higher average levels of anxiety are reported by Canadian adolescent girls than by boys (4.7 versus 2.9). In addition, one of the most frequent comorbid diagnosis of depression is conduct disorder (Ryan, E. P. & Redding, R. E., 2004; Fleming, J. E., Boyle, M. H., & Offord, D. R., 1993). Depression may indeed contribute to exacerbate delinquent conduct (Ryan, E. P., & Redding, R. E., 2004).

Consequences or Correlates of Depression during Adolescence

Suicide/Self-harm Risk
Depression in adolescent girls can lead to adverse consequences such as an increase in school failure or dropout. Even more alarmingly, a mood disorder like depression can substantially increase the risk of suicide or self-harm. Depression is thus reported to be the most frequent psychiatric illness in adolescents who attempt or commit suicide (Sanchez, L. E., & Le, L. T., 2001). Indeed, as found in the studies reported by Sanchez and Lan (2001), approximately 50 per cent of the adolescents who have successfully completed suicide suffer from a mood disorder, mostly major depression. In 2000-2001, 10.9 per cent of Ontario adolescent girls (aged 12 to 17) had seriously considered committing suicide in the previous 12 months, in comparison to 7.9 per cent of adolescent boys (Bushnik, T., 2005). According to the same data from the NLSCY (Bushnik, T., 2005), 41.4 per cent of Canadian adolescents girls who reported having thoughts of suicide (versus 26.4 per cent of boys) reported having attempting suicide one or more times in the previous 12 months. As reported by Adlaf et al. (2004), adolescent high-school girls of Ontario are also significantly more likely to think about suicide/self-harm than boys (17% versus 8%). Even more alarming is the fact that suicide may occur more often in marginalized groups like First Nations people. In Canada, suicide occurs roughly five to six times more often among First Nations adolescents than non-Aboriginal youth (Health Canada, 2003). In Northern Ontario, in the Nishnawbe-Aski community, there has been a 400 per cent increase in suicide over a ten-year period of time. However, as highlighted by Health Canada (2003), in First Nations as well as in mainstream societies, far fewer Native Canadian adolescent girls are committing suicide than Native male youth, perhaps due to less discontinuity in women’s roles who continue to raise children and take responsibility for the household (in contrast to young men’s roles changing from hunting and source of food to unemployment).

Precocious Sexuality and Teenage Pregnancies
In Canada, pregnancy rates among adolescent girls aged 15 to 19 years declined from 43 to 36 per 1,000 girls between 1997 and 2001 (Canadian Institute for Health Information: Canadian Population Health Initiative, 2005). Despite this decreasing tendency, a large number of Canadian adolescents get pregnant and some decide to terminate their pregnancy. Indeed, the number of babies born to adolescents ranges between 20,000 and 25,000 live births per year in Canada (Turner, R. J., Grindstaff, C. F., & Phillips, N., 1990). We know that adolescent
pregnancy is often a consequence of risky sexual behaviour while being often associated with other risk factors like depression (as well as conduct disorder and substance use) (Cassidy, B., Zoccolillo, M., & Hughes, S., 1996). In addition to being associated with an incomplete education, diminished employment opportunities, and enduring poverty, pregnant adolescents are at increased risk for depressive disorders. Authors (Barnet, B., Joffe, A., Duggan, A. K., Wilson, M. D., & Repke, J. T., 1996) report that almost 42 per cent of adolescent mothers suffer from depressive symptoms during their third trimester of pregnancy. This is more than double the adult rate of 20 per cent during pregnancy (Burt, V. K., & Stein, K., 2002). In an Ontarian study on social support and outcome of adolescent pregnancy, authors (Turner, R. J., Grindstaff, C. F., & Phillips, N., 1990) found that pregnant teens living with their parents had significantly fewer depressive symptoms. In addition, perceived support from family and friends was associated with fewer depressive scores. Adolescent pregnancy remains then a major endemic health problem for teenage mothers and their infants, especially when social support is unavailable.

**Substance Abuse and Gambling**

Risky behaviours, like substance abuse and gambling, often start in adolescence and tend to co-occur. From the literature on substance abuse, we know that high rates of depression often are comorbid with substance abuse. Tjepkema (Tjepkema, M., 2004) used data from the 2002 Canadian Community Health Survey: Mental Health and Well-being (CCHS) and found that depression can be both a precursor and an outcome of heavy drinking in Canadians aged 15 or older. As far as gambling is concerned, 50 per cent to 90 per cent of American adolescents aged 12 to 17 years old reported they had gambled within the last year (Lynch, W. J., Maciejewski, P. K., & Potenza, M. N., 2004). Fortin et al. (2001) estimated that the proportion of high school students in the province of Quebec who were struggling with gambling problems was 2.6 per cent. Interestingly, in this study, girls were also found to gamble as much as boys and to report as many gambling problems (Fortin, J. M., Ladouceur, R., Pelletier, A., & Ferland, F., 2001). Based on data from a U.S. survey, Lynch et al. (2004) found that adolescent gamblers were more likely than adolescent non-gamblers to report lifetime depression. However, the direction of the associations is not clear: Is gambling used as a coping strategy to escape depressed mood? Or does gambling in adolescent girls lead to depressed mood? Or perhaps there is a common risk factor, whether genetic or environmental, leading to both depression and gambling? This latter question remains open.

**Eating Disorders**

Eating disorders are associated with concurrent depressive disorders (Brage, D. G., 1995). Adolescent girls are at the highest risk for eating disorders because the desire for an ideal thin body is embedded in a vulnerable stage of physical and emotional development (Stewart, D.E. et al., 2002). The peak age of onset for eating disorders is between 14 and 18 years of age (Stewart, D. E. et al., 2002). For instance, bulimia nervosa affects approximately one per cent to three per cent of adolescent girls and young women in industrialized countries, in comparison to 0.2 per cent of adolescent boys and young men (Ross, H. E., & Ivis, F., 1999). Although many adolescent girls do not meet the clinical criteria for eating disorders (anorexia or bulimia nervosa), their risky eating behaviours can put them at risk for many health problems. In comparison to adolescent boys, girls were more likely to diet to try to lose weight. Adolescents dieting to lose weight also reported more depressive symptoms (McCreary, D. R. & Sasse, D.
K., 2002). Similarly, in a Canadian study based on the Ontario Student Drug Use Survey of Public and Catholic School Students, binge eating was associated with lower self-esteem, poor body-image, and more depression (Ross, H. E. & Ivis, F., 1999).

**Barriers to Care for Depression in Adolescent Girls**

In a recent update to the Canadian Task Force on Preventive Health Care (CTFPHC) guidelines, MacMillan et al. (2005) found no studies that examined treatment outcomes for adolescents (and children) screened for depression in primary care settings. Consequently, and as recommended by the CTFPHC (MacMillan, H. L. et al., 2005), there is insufficient evidence to recommend for or against routine screenings for depression in adolescents in a primary care setting. In addition, screening instruments for patients under 18 years old have undergone much less evaluation than tools designed for use with adults (MacMillan, H. L. et al., 2005). A similar gap is found in the treatment of depression in adolescents. As reported by the CTFPHC (2005), the comparative efficacy of psychopharmacology, psychotherapy or both treatments combined is still unknown. However, it is known that tricyclic antidepressants were found to be an ineffective treatment of adolescent depression (MacMillan, H. L. et al., 2005). Controlled studies indicating antidepressant efficacy in adolescents are relatively still absent (Ambrosini, P. J., 2000). A large, American, multi-centre trial (March, J. et al., 2004) that examined cognitive-behavioural therapy (CBT) and/or its combination with medication in depressed adolescents girls and boys showed that fluoxetine combined with cognitive behaviour therapy (CBT) offered the most favorable compromise between benefit and risk for teens with MD.

When considering mental health problems globally (depression included), Canadian adolescents were found to be less likely than other age groups to use any resources (Statistics Canada, 2002). Indeed, adolescents and young adults (15 to 24 ages) suffering from a mental health disorder reported the highest proportion of unmet needs. In this same survey (Statistics Canada, 2002), slightly more girls than boys (22% versus 20%) perceived unmet needs. Some reasons for this perceived barrier were: their preference for self-management, they did not bother, they were afraid to ask for help, or they were afraid of what others might think.

Interestingly, fear was also the first barrier to care identified by adolescent girls themselves. Indeed, in a participatory qualitative study (Ross, E., Ali, A., & Toner, B., 2003) of 48 Ontario girls (aged from 13 to 22 years) about depression, participants were highly aware of the barriers that could keep depressed adolescent girls from receiving help. They identified six barriers:

- Fear of the stigma surrounding depression contributes to increase their fear from people's reactions. A related barrier was the dismissal of their distress and suffering by others as being a typical passing phase of adolescence.
- Their own belief about stereotypes related to depression (i.e., being “crazy, weak or abnormal”).
- Accessibility due to the distance when living in rural places, costs, and waiting lists. Furthermore, these adolescent girls were ambivalent about help available in schools (e.g., availability versus privacy).
- Negative strong attitudes about antidepressants (i.e. fear of dependency and personality changes).
- Negative experiences with their doctors (i.e. one girl mentioned that she felt that the
doctor’s attitude was arrogant, sexist, and patronizing). As highlighted by the authors (Ross, E., Ali, A., & Toner, B., 2003), this finding is important because, for many suffering from depression, family doctors are usually the first persons approached for help. This first encounter should be positive to avoid a worsening of the condition.

• The teen's own behavior was mentioned by many adolescents as an actual barrier to receive help. For instance, adolescent girls may be in denial, hide their depression, ignore their depressed feelings, or try wait for depression to go away. Similarly, several adolescent girls mentioned that they may engage in risky behaviours such as unsafe sex or substance use.

**Barriers or Challenges of Providing Treatment/Preventive Care**

An actual barrier in the treatment or in the preventive care of depression is the absence of published research evidence on treatment outcomes for adolescents screened for depression in primary care settings. Screening instruments for depression in children and adolescents are scarce and less rigorously evaluated, compared to adults. In addition to lack of psychotherapy services for teens, the use of antidepressants is questionably efficacious in the management of depression in adolescent girls. Until more controlled studies (like Treatment for Adolescents with Depression Study) are available, treatment of depression will remain a challenge for the adolescent girl herself, and for the clinician as well as the family (Ambrosini, P. J., Bennett, D. S., Cleland, C. M., & Haslam, N., 2002).

A challenging barrier to treatment of depression is the reluctance of Canadian adolescent girls and boys (as well as young adults) to seek help for their mental health problems. Youth aged 15 to 24 years had the highest proportion of perceived unmet needs (Statistics Canada, 2002). Interestingly, other actual barriers were identified by adolescent girls such as:

1. A problem of accessibility due to many factors like long waiting lists, costs or to geographical remoteness (particularly in rural areas of Ontario and in some Native communities); and,

2. The behaviour of adolescent girls themselves, which can act as a barrier to screening for depression because they sometimes conceal their distress or mask their depression by engaging in risky behaviour.

Common perceived barriers identified by teen girls were: the fear of being stigmatized when seeking help, fear of others’ reactions coupled with their own stereotype about depression, dismissal of depression by others who misperceive their distress as being an integral (normal) part of adolescence, negative attitudes about antidepressants, and negative attitudes by some physicians.

**Knowledge Gaps**

- Absence of research that evaluates screening of depression in adolescents (regardless of sex) in primary settings, paucity of controlled studies on treatment of depression in adolescent girls, namely assessing efficacy of antidepressants, of psychotherapies and combined treatments
• An area of research open for further investigation is the mechanisms by which vulnerability to depression can be transmitted from parents to adolescents.

• More research is also needed on the influence of socio-economic status as well as on issues related to ethnicity.

• A more comprehensive sex and gender-based research on the developmental trajectories and processes (from a lifespan perspective) is needed to fully understand the context of emergence of depression in adolescent girls.

• Future studies will gain from taking an integrative approach to the biological, psychological, and social factors in depression. Such an approach will facilitate the identification of risk factors as well as protective factors (resiliency).

**Implications for Policy-Makers and Health-Care Providers**

• Grasping the unique development of adolescent girls will assist health-care providers and policy makers in improving health outcomes of depressed adolescents. Based on this understanding, steps can be taken to implement and evaluate preventive or intervention programs for depression in adolescent girls.

• To develop preventive programs and policies that meet the needs of adolescent girls, it is imperative that a sex and gender-based component to analyses must be integrated to research. The Canadian Task Force on Preventive Health Care (MacMillan, H. L. et al., 2005) found insufficient evidence to recommend for or against routine screening for depression in adolescents in a primary care setting. This recommendation holds true especially for depressed teen girls since research on them is even scarcer.

• A practical effective strategy would be to build more partnerships between school settings, families, and primary care to assist professionals in the primary care setting to identify, refer, or manage adolescent girls with depression.

• Since many adolescent girls suffer from comorbid disorders, another promising strategy can be to screen teen girls with other mental health problems for depression. Particular attention should be given to adolescent girls in rural areas of Ontario and to teens in First Nations communities who are in distress to make sure they can have access to nearby services.

• To deal with some of the barriers identified in this section, adolescent girls and primary health professionals (i.e. family physicians, nurses, etc.) should be educated about the early warning signs of depression and how to differentiate these from normal adolescent psychological changes.

• Health professionals should be reminded about the importance of a respectful confidential communication with teen patients and their families (i.e. through ongoing professional education, pamphlets, etc.).

• Sustained basic efforts of education (primary prevention) are badly needed to diminish fear of stigmatization in adolescent girls and to educate people in their milieu about how to distinguish between transient sadness and pervasive distress of depression.
<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Sample Recruitment, Instruments</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Other Outcome</th>
<th>Quality Rating</th>
</tr>
</thead>
</table>

Abbreviations: CI – Confidence Interval  
DIS – Diagnostic Interview Schedule (Diagnostic and Statistical Manual of Mental Disorders, Third Edition)  
NR – Not Reported  
OCHS – Ontario Child Health Study  
UM-CIDI-SF – University of Michigan – Composite International Diagnostic Interview-Short Form
CHAPTER 5: LIFE STAGE – PERINATAL

DONNA E STEWART

BACKGROUND

Depression is a major public health concern that is twice as common in women as men during the reproductive years. This subsection will review depression in women during pregnancy and the year following childbirth. Depression at this critical period of life poses special risks to the woman, her fetus or child and the rest of the family (Stewart, D. E., Robertson, E., Grace S.L., & Wallington, T., 2003).

RESULTS

The literature on depression in pregnancy was reviewed using the criteria outlined in the methods for this full report. The subsection on depression in the year following childbirth was greatly facilitated by an evidence-based, systematic literature review of risk factors and interventions for postpartum depression (PPD), conducted by Stewart et al. (2003) for Toronto Public Health. This update will include salient articles published since that date and those which specifically were conducted in Ontario and Canada. See Table 5.1 for summaries of included review studies and Table 5.2 for studies of included primary studies.

There were 1,623 eligible articles between 1990 and 2003 that were reviewed in the report by Stewart et al (2003). This review identified an additional 24 articles published since 2003 that were eligible for inclusion and their quality ranged from “good” (4), “fair” (9), to “poor” (11). Reasons for article exclusion: narrative reviews, inappropriate outcomes, not focused on women and depression.

EPIDEMIOLOGY OF PERINATAL DEPRESSION

Rates of depression in the first trimester of pregnancy are similar to those of age-matched non-pregnant women (7%). However, rates of depression in second and third trimester appear elevated (12%) in one Canadian systematic review (Bennett, H. A., Einarson, A., Taddio, A., Koren, G., & Einarson, T. R., 2004). Rates of depression appear to be slightly higher in women in the year after childbirth compared to age- and socio-economically matched women (10 to 15%), particularly in rates of first-onset and severe depression requiring hospitalization. The best international meta-analysis of over 12,810 births places post-partum depression (PPD) rates at 13 per cent (O’Hara, M. W., & Swain, A. M., 1996).

There is no evidence that rates of perinatal depression are any different in Canada than in other developed countries (Bennett, H. A., Einarson, A., Taddio, A., Koren, G., & Einarson, T. R., 2004). A study conducted in Hamilton, Ontario in 2001 of over 800 women, found PPD rates of 10 to 16 per cent at four weeks after delivery (Sword, W. et al., 2001). Given an Ontario annual live birth rate of approximately 130,000 (Statistics Canada, 2005), this suggests approximately 17,000 women are at risk of perinatal depression (excluding women with fetal loss). There is insufficient Canadian or Ontario data to determine small area rate variations.
Risk Factors for Depression among Perinatal Women

A Canadian systematic review found that strong predictors for PPD are depression or anxiety during pregnancy, recent stressful life events, poor social support and a previous history of depression. Moderate predictors are childcare stress, low self-esteem, maternal neuroticism and difficult infant temperament. Small predictors include pregnancy and birth complications, negative cognitive attributions, single marital status, poor relationship with partner and lower socio-economic status. No strong relationship was found for maternal age, ethnicity, education, parity, or sex of child (Robertson, E., Grace, S., Wallington, T., & Stewart, D. E., 2004). However, smaller studies have found elevated rates in teenaged mothers, immigrant women and sex of infant in specific cultures which value male infants more highly than female. Other researchers have identified other risk factors such as low self-esteem, single marital status and unplanned, unwanted pregnancies (Beck, C. T., 2001). A Canadian primary study by Bernazzani et al. (1997) found low socio-economic status, prenatal depression, past depression and stressors all contributed to postpartum depression. A meta-analysis by Beck (1996) found a moderate correlation between postpartum depression and infant temperament in the first year. Better understanding of this factor and the best methods to intervene are required.

Any of the same risk factors for PPD are applicable to depression during pregnancy, however the research base is less robust. The literature suggests that unwanted pregnancy and pregnancy complications (including fetal abnormalities) or hospitalization are additional important risk factors for depression during pregnancy. A primary study of French Canadian women found that employment, higher self-esteem, and satisfaction with social support were protective, while emotional difficulties, negative relationships, stressful life events and stress were associated with higher depression scores in pregnancy (Berthiaume, M., David, H., Saucer, J. F., & Borgeat, F., 1998). Another primary study from Montreal found 42 per cent of pregnant immigrant women to score in the depressed range and these women showed poorer function, more somatic symptoms, low social support, stressful life events, and poorer marital adjustment (Zelkowitz, P. et al., 2004).

Rates of depression are also elevated after miscarriage and stillbirth. A Canadian primary study (Stirtzinger, R. M., Robinson, G. E., Stewart, D. E., & Ralevski, E., 1999) showed elevated rates of depression for one year after spontaneous miscarriage. This finding has been confirmed by international studies (Brier, N., 2004).

The Effects of Perinatal Depression on the Mother, Fetus and Child

Untreated perinatal depression has risks to maternal, fetal and child health. In addition to the woman’s psychological distress, she is less likely to eat and sleep well or to seek or follow prenatal care. Self-harm, substance abuse and even suicide are additional concerns. Biologic perturbations in depression include alterations to endorphins and the hypothalamic pituitary axis, which result in higher serum cortisols. Infants born to depressed mothers are more likely to be premature, have smaller birth weights and more neonatal distress (Stewart, D. E., 2005; Ryan, D., Milis, L., & Misri, N., 2005a; Bonari, L. et al., 2004; Ross, E., Ali, A., & Toner, B., 2003).

Research suggests that PPD has salient but selective effects on the mother-infant relationship and child growth and development. Young children (especially boys) of mothers with PPD
have greater cognitive, behavioural and interpersonal problems than children of non-depressed mothers. With regard to emotional development, studies show an effect on infant affect, but do not support longer effects. Overall, a Canadian systematic review concludes it is exposure to prolonged or recurrent episodes of maternal depression that are most likely to have long-term effects on the child (Grace, S. L., Evindar, A., & Stewart, D. E., 2003). A thought provoking Canadian study (Guttmann, A., Dick, P., & To, T., 2004) found that maternal depression was associated with a two-fold increase in hospitalization of the infant.

**Treatment of Perinatal Depression**

A Canadian systematic review suggests that perinatal depression is amenable to the same treatment interventions as general depression, but there are few randomized controlled trials to guide practice and policy (Dennis, C. L., & Stewart, D. E., 2004). Clearly, drug exposure should be kept to the lowest effective doses and avoided, when feasible, in early first trimester. Controversy exists about whether antidepressant drug dose should be tapered prior to delivery and randomized controlled trials are needed to resolve this question (Howard, L. M., Hoffbrand, S., Henshaw, C., Boath, L., & Bradley, E., 2005).

Recent attention has focused on possible dangers to the fetus and infant associated with antidepressant drug treatment in pregnancy. To date, there is little evidence of teratogenicity from antidepressant drugs, as measured by major fetal malformations apart from recent reports of cardiovascular malformation in infants exposed to paroxetine while in the uterus (Diav-Citrin, O. et al., 2005). There may be a slightly increased rate of minor (not life threatening) malformations associated with first trimester use. There is recent evidence of a neonatal antidepressant withdrawal/toxicity syndrome which may result in increased irritability and even convulsions shortly after birth, which disappear within days. More long-term follow-up studies of children exposed to antidepressants before birth are required. Treatment considerations in pregnant women must weigh the risks of untreated depression against the benefits and risks of treatment (Hallberg, P. & Sjoblom, V., 2005; Ryan, D., Milis, L., & Misri, N., 2005b).

Controversy also exists about the use of antidepressant drugs during lactation and many experts suggest caution and close observation when these are used, especially in premature or ill infants. Psychotherapeutic treatments and social support are thought to be helpful for mild to moderate depression, but moderate to severe depression usually requires antidepressant drugs (Ross, L. E., Dennis, CL, Roberston Blackmore, E, & Stewart, D. E., 2005).

**Detection of Perinatal Depression**

Perinatal depression is greatly under-diagnosed and undertreated. Revisions to the Ontario Antenatal Record in the early 2000’s included maternal depression as recommended discussion topics for antenatal and postpartum care, but it is unknown how frequently or in what manner such enquiries are made.

A number of evidence-based scales have been developed and used to detect depression in pregnancy and afterbirth and among these, the Edinburgh Postnatal Depression Scale (EPDS) has been most widely used both in pregnancy and postpartum. Evidence suggests that two questions which are incorporated into most depression screening scales are almost as effective as the whole scale. These questions are: “Over the past two weeks have you felt down, depressed,
or hopeless?” and “Over the past two weeks have you felt little interest or pleasure in doing things?” (Whooley, M. A., Avins, A. L., Miranda, J., & Browner, W. S., 1997). Austin et al. (2003) found no current antenatal screening instrument met the criteria for routine use to predict postpartum depression. Opinions about the routine screening for depression in the perinatal period are divided and require careful consideration about sensitivity, specificity, ease of use and incorporation into practice, and cultural sensitivity. Other considerations are cost-effectiveness, harm potential and policies for effective referral and treatment (Dennis, C. L. & Creedy, D., 2004). It is essential that any screening program or depression identification program have associated with it, well defined, accessible and timely referrals for assessment, treatment and follow-ups; these are in short supply in Ontario and in Canada. Mother-baby units have been established for the treatment of postpartum depression in selected regions in the United Kingdom, Europe and Australia. These units offer many advantages in skilled treatment and other resources but are expensive and work best in large population areas.

### Prevention of Perinatal Depression

Prevention of perinatal depression is in its infancy as there are very few well designed randomized trials on which to base policy or practice. A Canadian systematic review concludes that the majority of studies have examined social support, psychotherapeutic or pharmacologic interventions, but none are sufficiently robust or effective to implement at this time (Dennis, C. L., 2004).

A Cochrane Collaboration review (Barlow, J., & Coren, E., 2001) examined 26 studies and found that parenting programs contribute to the short term psychosocial health of mothers, but whether these results are maintained over time are unknown or equivocal. Further study is required. Austin (2003) found little evidence from randomized controlled trials to support the implementation of antenatal group interventions to reduce postpartum depression in “at risk” women. Lumley et al. (2004) found that labour support; debriefing or enhanced maternal-infant interaction did not reduce postpartum depression.

A Canadian systematic review notes that a number of public health interventions have been examined to reduce or mitigate the impact of PPD on the mother-infant relationship and the growth and development of the child. These include home visiting, telephone counselling, coaching group interventions and infant massage. In general, the methodology is weak and the results inconclusive. Large, randomized controlled longitudinal trials are needed (Stewart, D. E., Robertson, E., Grace S.L., & Wallington, T., 2003).

### Barriers to Care for Depression in Perinatal Women

- Insufficient knowledge of perinatal depression and its treatment among women and health-care professionals.
- Too few local treatment facilities able to conduct timely, skilled assessment and treatment.
Knowledge Gaps

• Need to identify the best ways to prevent, detect and treat women with perinatal depression and understand the effects on their children.

• The effects of diverse ethnic and socio-economic factors and migration on the above factors.

• The long-term effects of antidepressant drugs on children exposed in utero or during breastfeeding.

• The effectiveness over time of parenting interventions to improve maternal psychosocial well-being.

• Better understanding of infant temperament on maternal depression and the most effective interventions.

Implications for Policy-makers and Health-Care Providers

• Increase awareness in health professionals about women at risk for perinatal depression.

• Development, identification and timely access to skilled treatment services for mothers with depression and their infants.
Table 5.1: Characteristics of Included Review Articles – Perinatal

<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Type</th>
<th>Age, yrs</th>
<th># of Studies</th>
<th>Description of Estimate</th>
<th>Mean, Min-Max</th>
<th>Conclusion</th>
<th>Overall Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meta-Analysis</strong></td>
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</tr>
<tr>
<td>Dennis, CL 2004, Canada</td>
<td>Meta-Analysis</td>
<td>NR</td>
<td>RCT-15</td>
<td>Relative risk of developing PPD</td>
<td>0.8, 0.1–1.5</td>
<td>Psychosocial interventions do not reduce the number of women who develop PPD. Professionally-based postpartum support is a promising intervention</td>
<td>Good</td>
</tr>
<tr>
<td>Bennett, HA 2004, Canada</td>
<td>Meta-Analysis</td>
<td>≥17, 28</td>
<td>Cross/Surv-11 Prospect-10</td>
<td>Prevalence of depression in third trimester</td>
<td>12%, 5.0–25.8%</td>
<td>Rate of depression in first trimester is similar to general population while rates during the second and third trimester are nearly double</td>
<td>Good</td>
</tr>
<tr>
<td>Barlow, J 2001, UK</td>
<td>Meta-Analysis</td>
<td>NR</td>
<td>RCT-26</td>
<td>Effect size of parent training programs for improving maternal psychosocial health</td>
<td>-0.3, -0.9–0.1</td>
<td>Parenting programs can make a significant contribution to the short-term psychosocial health of mothers</td>
<td>Good</td>
</tr>
<tr>
<td>Lumley, J 2004, Australia</td>
<td>Meta-Analysis</td>
<td>NR</td>
<td>RCT-43</td>
<td>Relative risk for random effect interventions vs. standard care for depression in universal, antenatal interventions</td>
<td>0.9, 0.1–1.3</td>
<td>Postnatal counselling interventions provided to women with depression or probable depression will reduce depressive symptoms. Support in labour and debriefing or mother-infant interactions do not reduce PPD</td>
<td>Fair</td>
</tr>
<tr>
<td>Beck, CT 2001, US</td>
<td>Meta-Analysis</td>
<td>NR</td>
<td>Cross/Surv-17 Prospect-67</td>
<td>Effect size of prenatal depression as a predictor of PPD</td>
<td>0.4, NR</td>
<td>There are many predictors of PPD including prenatal depression, maternity blues and a history of depression</td>
<td>Fair</td>
</tr>
<tr>
<td>Beck, CT 1996, US</td>
<td>Meta-Analysis</td>
<td>NR</td>
<td>Cannot Interpret-17</td>
<td>Correlation between PPD and infant temperament</td>
<td>0.3, 0.2–0.6</td>
<td>PPD and infant temperament are moderately correlated</td>
<td>Fair</td>
</tr>
</tbody>
</table>

continued on next page
## Table 5.1: Characteristics of Included Review Articles – Perinatal

<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Type</th>
<th>Age, yrs Range, Mean</th>
<th># of Studies</th>
<th>Description of Estimate</th>
<th>Mean, Min-Max</th>
<th>Conclusion</th>
<th>Overall Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systematic-Analysis</td>
<td></td>
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</tr>
<tr>
<td>Dennis, CL 2004, Canada</td>
<td>Systematic Review</td>
<td>NR</td>
<td>Case-Cont-1 RCT-5 Open-label single group-1</td>
<td>Prevalence of PPD based on various preventive methods</td>
<td>NR 5.7–62.5%</td>
<td>No specific biological approach can be strongly recommended for clinical practice based on the evidence</td>
<td>Fair</td>
</tr>
<tr>
<td>Robertson, E 2004, Canada</td>
<td>Systematic Review</td>
<td>NR</td>
<td>Meta-Analysis-2 Prospect-17</td>
<td>Prevalence of PPD within six months after delivery</td>
<td>13% 10–15%</td>
<td>PPD is the most common complication of childbearing. Depression and anxiety during pregnancy, recent stressful life events, poor social support and previous depression are strong predictors of PPD</td>
<td>Fair</td>
</tr>
<tr>
<td>Austin, MP 2003, Australia</td>
<td>Systematic Review</td>
<td>NR</td>
<td>Cross/Surv-12 Prospect-4</td>
<td>Prevalence of PPD</td>
<td>NR 5.5–31.5%</td>
<td>PPD is a significant public health problem that requires a predictive screening tool with increased sensitivity and specificity for routine application in the antenatal period</td>
<td>Fair</td>
</tr>
<tr>
<td>Grace, SL 2003, Canada</td>
<td>Systematic Review</td>
<td>20–40, NR</td>
<td>Cross/Surv-3 Prospect-8 Case-Cont-1 Meta-analysis-1</td>
<td>N/A</td>
<td>N/A</td>
<td>Prolonged or recurring episodes of PPD most likely to have long-term effect on child. Strongest effects of PPD on child’s cognitive development (language, IQ, Piaget’s object concept tasks)</td>
<td>Fair</td>
</tr>
</tbody>
</table>

**Abbreviations:**
- Case-Cont – Case-Control
- Cross-Surv – Cross-sectional/survey
- N/A – Not Applicable
- NR – Not Reported
- PPD – Postpartum Depression
- Prospect – Prospective Cohort
- RCT – Randomized Controlled Trial
- Retro – Retrospective
Table 5.2: Characteristics of Included Primary Articles – Perinatal

<table>
<thead>
<tr>
<th>Author</th>
<th>Study Sample Recruitment</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Other Results</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hodnett, ED</td>
<td>Randomized Controlled Trial: Women giving birth at hospital</td>
<td>15–48, 30</td>
<td>6915</td>
<td>EPDS</td>
<td>8.7-Point prevalence of PPD in women who received continuous nursing support during labour</td>
<td>All comparisons and future maternal preferences favour continuous labour support as a positive factor on maternal birthing experiences</td>
<td>Good</td>
</tr>
<tr>
<td>2002, Canada, US</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.9-Point prevalence of PPD in women who received usual care during labour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sword, W</td>
<td>Cross-sectional: Obstetrics Patients Ontario</td>
<td>≥ 21–35+</td>
<td>875</td>
<td>EPDS</td>
<td>10.0-Prevalence of clinical depression 4 weeks after postpartum discharge</td>
<td>Fair</td>
<td>Variables showing direct effect on postpartum depression include lower occupational status, prenatal depression level, more distal stressors, personal psychiatric history</td>
</tr>
<tr>
<td>2001, Canada</td>
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<tr>
<td>Bernazzani, O</td>
<td>Prospective Cohort: Obstetrics Patients Quebec</td>
<td>≥ 20, 29</td>
<td>213</td>
<td>BDI, EPDS</td>
<td>12.7-Point prevalence of depressive symptomatology at 6 months postpartum</td>
<td>Fair</td>
<td>Variables showing direct effect on postpartum depression include lower occupational status, prenatal depression level, more distal stressors, personal psychiatric history</td>
</tr>
<tr>
<td>1997, Canada</td>
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</table>

Abbreviations: BDI – Beck Depression Inventory  
EPDS – Edinburgh Postpartum Depression Scale  
PPD – Postpartum Depression
CHAPTER 6: LIFE STAGE – PERIMENOPAUSE

DONNA E STEWART

BACKGROUND

The average age of menopause in North American women is 51.3 years, but reproductive aging is a process, not an event and not all healthy women follow the same patterns. Nor will all women have symptoms as they transition through perimenopause to menopause. Moreover, women with symptoms will experience them in different combinations and levels of intensity (Stewart, D. E., 2005). The term perimenopause includes the time before menopause when endocrinologic, biologic and clinical features of approaching menopause commence. The median age of onset of perimenopause is 47.5 years and these transitional years are the time of maximal symptoms related to menopause. The main symptoms are irregular menstrual periods in timing and amount, hot flashes (flushes), night sweats, sleep disturbances, vaginal dryness and urinary tract disorders. Some women also experience breast tenderness, headaches, weight gain, thinning of the skin, dizziness, palpitations and muscle and joint pain. Emotional symptoms may include irritability, fatigue, tension, nervousness, depression, lack of motivation, insomnia and feelings of isolation. The personal, social and cultural aspects of women’s lives during these years play vital roles in psychological well-being or disturbances (Stewart, D. E., 2005).

RESULTS

One systematic review, one Canadian primary study and five international primary studies were found on perimenopausal depression. A number of additional background resources were also identified. The Canadian primary study was given a “good” quality rating, the systematic review was “poor” and the quality of the primary studies varied from ‘fair’ to “poor” (see Table 6.1). Reasons for exclusion included articles not relevant to women and depression and no report of study methodology.

EPIDEMIOLOGY OF PERIMENOPAUSAL DEPRESSION

There are approximately 2.2 million women in Ontario between the ages of 45 to 55 years (CCHS) – the ages at which the vast majority will undergo menopausal transitions. There are no reliable estimates of depression during perimenopause but NPHS shows a prevalence of approximately five per cent for Canadian women in this age group. Depression surveys conducted in an Ontario menopause clinic showed high rates of depression in that age group compared to women in the community (Stewart, D. E., Boydell, K., Derzko, C., & Marshall, V., 1992).

There is no reason to think that perimenopausal women in Ontario are at any greater risk of depression compared to other Canadian or international women. There is a long-standing debate about whether “menopause” is associated with higher rates of depression. A critical review of the literature in 1996 (Nicol-Smith, L.) concluded that there was insufficient evidence at that time to maintain that menopause caused depression. Subsequent studies (see below) suggest that perimenopause (not menopause) is associated with higher rates of depression, especially in women with a history of previous depression. Accordingly, menopause is not a risk.
factor for depression in most women, but perimenopause may be a risk factor for depression in some women. Population rates of depression in women in perimenopause are not elevated and rates of depression fall after menopause but never become equal or lower than in men.

**Risk Factors for Depression among Perimenopausal Women**

There is some data suggesting that perimenopausal women of lower socio-economic status are at slightly higher risk of depression than their more affluent cohorts (Bromberger, J. T., Harlow, S., Avis, N., Kravitz, H. M., & Cordal, A., 2004; Dennerstein, L., 1996). There is no data comparing women by urban vs. rural, ethnicity, or religion. An Ontario study showed that women with previous depression are at higher risk for depression during perimenopause (Stewart, D. E., Boydell, K., Derzko, C., & Marshall, V., 1992). A review from Australia (Dennerstein, L., 1996) reported that wellbeing was not associated with menopausal status but rather with current health status, psychosocial and lifestyle variables. Negative moods were associated with past depression, stressors, and negative attitudes to menopause. North American and European women reported more symptoms than Asian women. The author found no increase in major depression with “menopause” but notes contradictory evidence in some studies which specifically defined as premenopause, perimenopause and menopause.

The Study of Women's Health Access the Nation (SWAN) by Bromberger et al. (2001), found that psychological distress was much higher in perimenopausal than pre- or postmenopausal women and was independent of vasomotor symptoms. The SWAN study also showed that early perimenopausal women had higher odds of irritability, nervousness and frequent mood changes. Women with less than high school education were most likely to experience dysphoric moods (Bromberger, J. T. et al., 2003). Hispanic and African American women had the highest odds and Chinese and Japanese women had the lowest odds for a depression score (CES-D) in the depressed range (Bromberger, J. T., Harlow, S., Avis, N., Kravitz, H. M., & Cordal, A., 2004). More recently, data from the SWAN study has been used to explore whether physical health effects are associated with clinical depression in midlife women. Depression was associated with a greater risk of diabetes mellitus, largely mediated by central adiposity. However, African American women with depression had an increased risk of diabetes independent of central adiposity (Everson-Rose, S., 2005). Recurrent major depression was also independently associated with coronary artery and aortic calcification which was partially mediated by hip-waist ratio. These findings suggest that recurrent major depression may be a risk factor for early atherosclerosis in women (Agatisa, P. K. et al., 2005). SWAN data has also been used to show that midlife women with a past history of depression are at risk for physical symptoms, body pain and poor social and sexual functioning, even in the absence of current depression (Agatisa, P. K. et al., 2005). They have also shown that higher follicle stimulating hormone (FSH) concentrations are associated with reporting more vasomotor symptoms (Randolph, J. F., Jr. et al., 2005).

A study by Freeman et al. (2004) also shows a higher risk of depression in perimenopause than in menopause. A Canadian study using the 1994 National Population Health Survey (Cairney, J., & Wade, T. J., 2002a) showed that women compared to men had significantly higher rates of depression both before and after the age period associated with menopause, and that hormone replacement therapy did not have a significant impact on these observed relationships.
Barriers to Care for Depression in Perimenopausal Women

No literature addressed this issue but a shortage of family doctors and psychiatrists in Ontario likely results in substantial barriers to care in poorly serviced communities, including those in rural and northern areas.

In conclusion, rates of depression are not elevated overall in women during perimenopause, but women with high stress or previous depression are at higher risk at this time of life. Risks of physical illnesses such as coronary artery disease, stroke, and diabetes are elevated in mid-life women with depression and past depression. This makes the identification and treatment of depression a health priority. Fortunately, the rates of depression in women fall after menopause.

Knowledge Gaps

• The role of psychosocial and biologic (including hormonal) factors in depression in perimenopausal women is poorly understood and requires further research. Such information might contribute to better prevention and treatment for women who become depressed at this stage of life.

Implications for Policy-makers and Health-care Providers

• Consider psychosocial and biological factors in midlife women who present with depression.
<table>
<thead>
<tr>
<th>Author</th>
<th>Year, Country</th>
<th>Study Sample Recruitment</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Other Results</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td>3.9-One-year prevalence of depression in Canadian women aged 55+ (postmenopausal)</td>
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<td>25.2-Lifetime prevalence of women reporting recurrent episodes of major depression</td>
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<td>46.4-Prevalence of women reporting depressive symptoms in the previous week who also report irregular menstrual cycles</td>
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<td></td>
<td>≥4.0-Prevalence of major depressive disorder in women in transition menopausal phases over four-year study</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: BSI – Brief Symptom Inventory  
CES-D – Centre for Epidemiological Studies – Depression Scale  
CI – Confidence Interval  
NR – Not Reported  
OR – Odds Ratio  
SWAN – Study of Women’s Health Across the Nation  
UM-CIDI-SF – University of Michigan-Composite International Diagnostic Interview-Short Form
Background

Research has shown that mental health problems have significant social and economic costs that place an especially heavy burden on the workplace (Dewa, C. S. & Lin, E., 2000; Lim, D., Sanderson, K., & Andrews, G., 2000; Kessler, R. C. & Frank, R. G., 1997). For example, Perez and Wilkerson (1998) found that seven per cent of all Canadian workers reported absenteeism due to mental and emotional health problems. Compared to the rest of the working population, those with a psychiatric disorder will have a greater number of days during which they are either unproductive or unable to function fully (Dewa, C. S. & Lin, E., 2000; Lim, D., Sanderson, K., & Andrews, G., 2000; Kessler, R. C., Turner, J. B., & House, J. S., 1987). Further, approximately 50 per cent of those who miss work because of mental or emotional problems will take either 13 or more days off or will never return to their jobs (Perez, E., & Wilkerson, B., 1998). The implications of these findings are especially pertinent to women given the fact that women suffer from major depression at twice the prevalence proportion of men (Kessler, R. C., 2003; Ernst, C., & Angst, J., 1992) and a greater proportion of women versus men report stressful work (Park, J., 2003). Thus, the objective of this review was to summarize the current literature on working women and major depression, identify the risk factors of working women for the development of depression, highlight the barriers to care and subsequent preventative measures, and suggest future research directions and policy interventions.

Results

A total of 14 articles were retrieved from the specific literature search. Thirteen sources were primary articles, and one article was a meta-analysis. Six of the articles were excluded for one or more of the following reasons: 1) collection dates were not reported; 2) studies were conducted prior to 1990; 3) the number of study participants was less than 50 or the number of articles was less than 5; 4) the incidence/prevalence estimates could not be derived/calculated; 5) the analyses/results were not stratified by sex; and, 6) the methodology was not described.

Of the remaining eight articles to be reviewed, five of the articles were based on large, epidemiologic samples (four were ‘good’ and one was ‘fair’ quality). Two of the studies used a longitudinal design and one study was a randomized control trial of ‘fair’ quality (see Table 7.1).

There were three articles from the grey literature, including a fact sheet, a report from a marketing firm (Leger Marketing), and a report from an Employee Assistance Program (EAP) (WarrenShepell Research Group). This material was particularly useful as it provided information on previously unavailable data and policy implications for employers and organizations.

Epidemiology of Depression among Working Women

Unfortunately, the prevalence of mental disorders among the general working population in Canada has received relatively little attention. Unpublished analyses based on the Canadian
Community Health Survey (Cycle 1.1) estimated a 12-month prevalence proportion of major depression disorder (MDD) of eight per cent among working Canadians, of which 64 per cent were women (Munce, S. et al., 2005). Using Census of Canada data, Walters (1993) conducted a study on 356 Canadian women and examined the various social characteristics of those who reported stress, anxiety, and depression. Walters (1993) found, that those women of the lowest education and economic means were more likely to report depression. Another study by Beiser and Hou (2001) examined the deleterious effects of unemployment and the protective effects of language facility on the mental health of Southeast Asian refugees resettling in Canada. An important finding of this study was after the first decade in Canada, English language fluency was a significant predictor of depression and employment, particularly among refugee women. A randomized trial by Markle-Reid et all (2002) evaluated the two-year costs and effects of a proactive, public health nursing case management approach compared with a self-directed approach for 129 single parents (98% were mothers) on social assistance in a Canadian setting, of whom 43 per cent were depressed. The results of this important study indicated that this proactive approach showed a greater reduction in depression and higher social adjustment.

In a study conducted by Leger Marketing on behalf of Wyeth Canada on 1,508 working women over the age of 18, twenty per cent had been diagnosed or showed symptoms of depression or anxiety. Women in British Columbia and Quebec both reported a prevalence of MDD of 23 per cent, while Ontario women reported a proportion of 19 per cent. In the U.S., it was observed that among the employed population, and in accordance with epidemiologic data from the general population, major depressive disorders are twice as prevalent among women as men (10.2% compared to 5.9%) (Marcotte, D. E., Wilcox-Gok, V., & Redmon, P. D., 1999). In addition, these disorders are more prevalent among middle-aged workers (e.g., 40 to 45 years) than among either younger (e.g., 20 to 24 years) or older workers (e.g., 50 years) (Marcotte, D. E., Wilcox-Gok, V., & Redmon, P. D., 1999).

**Risk Factors for Depression among Working Women**

**Occupational Groups**

Many findings have suggested differences in the prevalence of the depression among occupational groups. Occupations vary in the demands they make, the rewards they provide (Karasek, R. A & Theorell, T., 1990), and the hazards they contain (Messing, K., 1991), and these factors can combine with other demands to influence women’s mental health. However, as the trends indicate, the associations are complex. For example, even the least satisfying and rewarding types of work appear to be a protection against depression, while professional and managerial occupations, those jobs that appear to have the greatest rewards and decision latitude, are a source of stress. This finding was somewhat supported by the Ontario Health Survey Mental Health Supplement, which found higher proportions of affective disorders among professionals and middle management, but also found higher proportions of disorders among unskilled clerical workers (Dewa, C. S., & Lin, E., 2000). Clearly, further research is essential if we are to understand the meaning women assign to the diverse influences on their mental health.

Inconsistent findings have been reported on the many studies that have compared the health of homemakers with the health of women in the labour force. Working outside the home has been both positively and negatively associated with health (Hall, L. A., Gurley, D. N., Sachs,
B., & Kryscio, R. J., 1991). On the one hand, paid work has been related to better health and satisfaction, yet other studies have identified no health differences between employed women and homemakers. With respect to mental health, it was argued that the combination of paid and unpaid labour is harmful, creating stress (Lowe, N. K., 1989) and fatigue (Tierney, D., Romito, P., & Messing, K., 1990). But other research has emphasized the benefits of employment outside the home, with homemakers being more likely to report depression (Brown, G. W., & Harris, T., 1978). Both patterns were identified in an Ontario study of 356 women (Walters, V., 1993), and the findings are discussed below. These contradictions highlight the complexity of individual experiences (e.g., variations in family structure) and socio-demographic circumstances (e.g., socio-economic status and ethnicity) and their effect on mental health.

Similarly, discrepant views have been argued regarding part-time versus full-time work. Over the past two decades, women have consistently represented 70 per cent of part-time workers (Statistics Canada, 1997; Tilly, C., 1996; McRae, S. & Kohler, E., 1995). Since women retain responsibility for home and child care regardless of their employment status (Lero, D., Brockman, L. M., Pence, A. R., Goelman, H., & Johnson, K. L., 1993; Higgins, C., Duxbury, L., & Lee, C., 1992; Duxbury, L., Higgins, C., Lee C., & Mills, S, 1991), it has been suggested that part-time work offers the “best of both worlds”, enabling women to pursue career interests while still affording time to spend with their families (Kahne, H., 1992; Duffy, A, Mandell, N., & Pupo, N, 1989). On the other hand, it has been argued that the low pay, routine tasks, and limited advancement opportunities that characterize so many part-time jobs make it more difficult to balance family demands and threatens to marginalize the women with these schedules (White, J., 1983). A Canadian epidemiologic study conducted by Higgins and colleagues (2000) found that part-time work was associated with lower work-to-family interference, better time management ability, and greater life satisfaction for women in both “career” (i.e., professional and managerial) and “earner” (i.e., technical, clerical, administrative, retail, or production work) positions. Career women reported higher life satisfaction and lower depressed mood than did women in “earner” positions. However, it is important to note that career women were substantively more likely to note that part-time work was stigmatized at their organization, and consequently, felt that their advancement opportunities were limited.

**Work-related Stress**

The differences in the prevalence rates of depression among the occupational groups raise the issue of the links between the work environment, stress, and depression. There is a growing awareness of the prevalence of work-related stress. In a population-based sample of Canadians, 30.8 per cent said that most days at work were either a bit or extremely stressful. This feeling was reported by a higher proportion of women than men: 36.7 per cent versus 29.0 per cent (Park, J., 2003). In 1998, 25 per cent of women and 21 per cent of men in Quebec were exposed to a combination of low latitude and high psychological demands, known as “job strain” (Bourbonnais, R. & Mondor, M., 2001). Individuals who experienced work-related stress were twice as likely to have a psychiatric condition as those who did not (23% compared to 11% for men, and 30 per cent compared to 15 per cent for women). Further, these authors found that in a five-year intervening period, low decision latitude, specifically, rose from 44 per cent to 56 per cent. This increase was irrespective of age and sex, but, correspondingly, it was higher for women than men (Bourbonnais, R., & Mondor, M., 2001).
These sex differences with respect to job strain and depression also appear in US studies. For instance, among a cross-sectional survey of 33,689 US women reporting on job strain and health status, those who indicated that they did high-strain work were observed to be at a higher risk of self-reported mental health problems (Amick, B. C., III et al., 1998). Grzywacz and Dooley (2003) found a four-fold increase in the risk of depression associated with inadequate employment environments in the California Work and Health Survey and a two-fold increased risk in the U.S. National Survey of Midlife Development.

Social and Demographic Factors

A study by Walters (1993) on the social characteristics of various mental health problems in 356 Ontario women found that depression was reported by those who are most marginal, with meager resources on which to draw. Further, in comparison to women with stress and anxiety, women with depression were more likely to have a lower level of education, lower incomes, English as their second language, and a tenuous position in the labour force, with particular fears of “money problems” and unemployment. Stress and anxiety were associated with problems of combining work and parenting, while women who reported stress alone reported difficulty finding time for themselves. Women who reported depression and anxiety, on the other hand, were more likely to report loneliness. This finding was supported by a recent study, which found that among employed women, dissatisfaction with the quality of social contacts 24 years previous, entailed a four-fold risk of depression. Among employed men, few social contacts produced the same increase in risk of depression (Michelsen, H., & Bildt, C., 2003). Interestingly, specific risk factors were identified for women with poor psychological well-being, as identified by the General Health Questionnaire (GHQ): having children in the home, not having time to oneself, time pressure at work, high mental load at work, and psychological demands at work. These patterns underscore the role of family relationships (including the burden of caring roles) and the combined demands of paid and unpaid work in determining variations in mental health. These dimensions, and their associated stresses, can be exacerbated by financial strains and, for those experiencing depression and anxiety, a feeling of social and emotional isolation.

Immigrant and refugee women are at a particular risk of such feelings of isolation. For example, poor English language skills may increase the possibility of unemployment, which, in turn, jeopardizes mental health, as alluded to above. For the native born population of North America, unemployment may create depression through a variety of pathways including financial strain, loss of self-esteem, and restriction of social contact (Warr, P., 1987; Kessler, R. C., Turner, J. B., & House, J. S., 1987; Atkinson, T., Liem, R., & Liem, J. H., 1986; Olafsson, O. & Svensson, P. G., 1986; House, J. S., Strecher, V., Metzner, H. L., & Robbins, C. A., 1986). Although unemployment also jeopardizes the well-being of immigrants and refugees (Selten, J. P., & Sijben, N., 1994; Beiser, M., Gill, K., & Edwards, R. G., 1993; Westermeyer, J., 1989; Caplan, R. D., Vinokur, A. D., Price, R. H., & van, Ryn M., 1989), this relationship is affected by a number of other factors including the phase of resettlement, the differential exposure and vulnerability to unemployment, and by differential mediating factors. For example, in a ten-year Canadian study of Southeast Asian refugees, by the end of the first decade, English language fluency was a significant predictor of depression and employment among refugee women. The authors noted that it was particularly troubling that it is precisely those persons most likely to be isolated – women, the poorly educated, and the
elderly were the least likely to learn English, and thus to risk further isolation. Ironically, the authors noted in a previous study (Beiser, M., & Hou, F., 2001) that language training programs provided for refugees at the time of their arrival were primarily directed towards persons deemed most likely to take part in the labour force. As a result of this policy, men were more likely than women to receive English language training. Since the current study reported that English fluency was a more salient job-securing advantage for women than for men, the authors recommended that policies regarding language training for refugees should be redirected.

**Barriers to Care for Depression in Working Women**

In the study conducted by Leger Marketing on working Canadian women, almost all respondents (91%) expressed the need for better and more accessible help from their work/employer for treatment of their depression/anxiety through increased availability of resources. These include having a health-care professional or a counselor on site (22%), having more company resources available (18%), making these resources better known to employees (12%) and being a more understanding/educated employer (10%). This last point is especially pertinent given the fact that the women in this survey were less likely to discuss their symptoms/feelings with their boss/employers (35%).

Interestingly, only half of the women interviewed said they knew that their workplace offered an employee assistance program (47%). Only 20 per cent of women had taken advantage of their EAP, with most being satisfied with the help they received. More women in professional (61%), executive/management (57%), technical/technician (60%) and administrative (57%) roles were aware of their workplace offering EAPs for depression and anxiety as compared to those in marketing/sales (36%) and service (27%) roles. As a result, those from marketing/sales (10%) and service (7%) roles are much less likely to take advantage of the EAP than women in other occupations.

In addition to the institution of support resources, employers must also make efforts to tailor a job according to a woman’s individual needs, such as part-time work. However, as noted by Higgins and colleagues (2000), it is not simply enough to make part-time work available. They note that in order to truly make a difference in the quality of life/psychological well-being for women with children, part-time work must also be made desirable and rewarding. For example, and as discussed above, organizations that employ career women on a part-time basis might be guided by an awareness that the high level of work involvement in this group of employees may sensitize them to the career penalties associated with part-time hours. Employers may want to ensure that these women are sent the message that they are valued members of the organization and ensure access to stimulating assignments and continued connection with promotional paths.

Proactive regimens may also be useful, especially in vulnerable populations, as exemplified in a study of 129 single parents (98% were mothers) on social assistance in Ontario, of whom 43% had major depressive disorder. The authors argued that depression can affect a parent’s ability to work and parent, which can adversely affect children (Byrne, C. et al., 1998). In turn, a combination of poverty and depression in parents can result in high risk and higher demand for all types of health and social services (Elkin, I. et al., 1989). Social assistance benefits could be less effective if the parent suffers from mood disorders (Elkin, I. et al., 1989). Thus, unemployment may be a symptom of an imbalance between the level of stress and a parent’s problem.
solving and coping. Problem-solving or coping capacities are reduced in the presence of mood disorders (Roberts, R. E. & Lee, E. S., 1993; Huxley, T. H., 1990). The authors concluded that it was more costly to under-serve this population, and therefore suggested the use of proactive, public health nursing interventions.

In the case of immigrants and refugees, although early identification and treatment of psychiatric problems would potentially benefit future mental health as well as socioeconomic adjustment (Hinton, W. L., Tiet, Q., Tran, C. G., & Chesney, M., 1997), they tend to avoid or to be ill-served by the formal treatment system (Beiser, M., Gill, K., & Edwards, R. G., 1993; Munroe-Blum, H. & Boyle, M. H., 1989). However, there is some support that they will use and benefit from culturally-sensitive care (Canadian Task Force on Mental Health Issues Affecting Immigrants and Refugees, 1988; Kinzie, J. D., 1985). Programs should concentrate on such care and, for women in particular, provide pathways to practical support such as fluency training programs (Beiser, M., & Hou, F., 2001).

In conclusion, MDD remains a significant problem for women in the labour force, and in accordance with epidemiologic data from the general population, working women also suffer from depression at double the prevalence of men. In Canada, it is estimated that five per cent of working women suffer from depression and 19 per cent of working Ontario women have been diagnosed or reported symptoms of depression or anxiety. There has also been a growing awareness of the role of the work environment on women's mental health, with a greater proportion of women versus men describing their work as stressful, which in turn leads to a greater proportion of psychiatric problems among women.

As noted in Dewa and colleagues' (2004) report on mental health in the workplace, “if we are to develop effective policies and programs, the answers to the questions must be based on solid evidence”. Thus, future research should focus on the goals, as listed above.

**Knowledge Gaps**

- The understanding of the interplay of women’s domestic and occupational/professional spheres in order to attain a more ’global’ picture of working women and depression (i.e., mediating/moderating variables between work stress and depression.
- Further studies are needed concerning the different types of interpersonal relationships women participate at work and leisure, and how these interact, to identify protective and risk factors for depression.
- Identification of the patterns of depression among the different occupational groups and industry sectors, with special attention to sex differences (Dewa, C. S., Lesage, A., Goering, P., & Craveen, M., 2004).
- There is also a need to understand the association between employee-sponsored benefits and the prevalence of depression in the workplace as well as patterns of disability related to depression.
- Larger, longitudinal studies are also needed in this area in order to fully grasp how various stages/levels of employment affect women's mental health.
Implications for Policy-makers and Health-Care Providers

• Employers or policy makers must create better and more accessible help for mental health problems arising among working women.

• Employers should have more company mental health resources available, and make these resources better known to employees and provide training to create more understanding/education about mental health.

• As well as making services more accessible, employers or policy makers should redesign jobs and organizational practices to maximize employee autonomy and train managers to recognize symptoms of emotional problems/depression among peers (Warren Shepell, 2005).
Table 7.1: Characteristics of Included Primary Articles – Unemployed and Working Women

<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Sample Recruitment, Instruments</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Other Results</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michelsen, H 2003, Sweden</td>
<td>Prospective Cohort: Employed Subjects</td>
<td>42–58, NR</td>
<td>190</td>
<td>DSM-IIIR; GHQ</td>
<td>13.0-Prevalence of depression in employed women 21.0-Prevalence of impaired psychological well-being in employed women</td>
<td></td>
<td>Good</td>
</tr>
<tr>
<td>Walters, V 2002, Canada</td>
<td>Cross-sectional: Population-based NPHS – 1994/1995</td>
<td>25–4, NR</td>
<td>11,241 Women and Men</td>
<td>UM-CIDI</td>
<td>37.4-Point prevalence of unemployed women</td>
<td>(-1.6), SD 0.2; (-0.1) SD 0.2 -Rate of distress in employed women; employed full-time women versus women not employed</td>
<td>Good</td>
</tr>
<tr>
<td>Beiser, M 2001, Canada</td>
<td>Prospective Cohort: Convenience Sample, South Asian Refugees Vancouver, British Columbia</td>
<td>26–88, 41 Women and Men</td>
<td>608</td>
<td>DSM-IIIR</td>
<td>6.5-Point prevalence of major depression at study start 2.3-Point prevalence of major depression at study end (refugees in Canada for 10 years)</td>
<td></td>
<td>Good</td>
</tr>
<tr>
<td>Vermeulen, M 2000, Canada</td>
<td>Cross-sectional: Population-based NPHS – 1994/1995</td>
<td>20–64, NR</td>
<td>4,185</td>
<td>UM-CIDI</td>
<td>NR</td>
<td>Mean psychological distress score (SE) In Canadian women: 3.4 (0.1) In ‘unskilled’ women: 3.7 (0.2) In ‘professional’ women: 3.2 (0.2)</td>
<td>Good</td>
</tr>
<tr>
<td>Markle-Reid, M 2002, Canada</td>
<td>Randomized Controlled Trial: Sole-support parents applying for social assistance Ontario</td>
<td>NR</td>
<td>126</td>
<td>UM-CIDI-SF</td>
<td>20.3-One-year prevalence of depression at two-year follow-up in public health nursing intervention 18.3-One-year prevalence of depression at two-year follow-up in self-directed intervention group</td>
<td></td>
<td>Fair</td>
</tr>
<tr>
<td>Higgins, C 2000, Canada</td>
<td>Cross-sectional: Canadian Federal Public Sector Employees and Private Sector Employees</td>
<td>NR, 34</td>
<td>5892</td>
<td>Felt that they just couldn’t get going; wondered if anything was worthwhile anymore (12 months)</td>
<td>NR</td>
<td>Mean depressed score in parttime earner Mean (SD): 2.4 (0.8) Mean depressed score in fulltime earner Mean (SD): 2.8 (0.8)</td>
<td>Fair</td>
</tr>
</tbody>
</table>

Abbreviations: DSM-IIIR - Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised GHQ – General Health Questionnaire NR – Not Reported SE – Standard Error UM-CIDI-SF – University of Michigan – Composite International Diagnostic Interview (– Short Form)
CHAPTER 8: SPECIAL GROUPS – ABORIGINAL WOMEN

LISE COULOMBE

BACKGROUND

According to Statistics Canada, about one in five Aboriginal people (20.1%) were living in Ontario in 2001, representing less than two per cent of the provincial population. Ontario counts 118,830 First Nations (FN) people, 22,790 Metis and 1,300 Inuit. Several distinct dialects exist within each linguistic group: Ojibway, Cree, Algonquin, Potawatomi, Mohawk, Delaware, Oneida, Ottawa, Seneca, Onondaga, Cayuga, Tuscarora. Ontario’s total FN population is 147,000 of which 50.8 per cent reside on reserve and 49.2 per cent reside off-reserve. The Constitution Act defines “Aboriginal” as an inclusive term, referring to FN, Inuit, and Metis. Aboriginal people refer to themselves by their specific tribal affiliation (such as Mi’kmaq, Cree, Innu, Ojibwa) or FN, Inuit or Metis. FN people may also be referred to as ‘Native’ or ‘Indian’. The latter term can be offensive to some FN people, and so its use in this chapter will be restricted to references from government statistics and documents using this term. The government classifies FN people according to whether or not they are registered under the federal Indian Act. “Status Indians” are registered under the Act and numbered 610,874 in 1996. FN people who are not registered under the Act are referred to as “non-status Indians”.

The Aboriginal population in 2001 was much younger than the non-Aboriginal population. Children aged 14 years and under represent one-third of the Aboriginal population in 2001, far higher than the corresponding share of 19 per cent in the non-Aboriginal population. In Canada, about one-half of Aboriginal people lived in urban areas.

Aboriginal people are increasingly aware of the social and political dimensions of current health problems and their roots in historical oppression. The mental health of many Aboriginals is affected by the economically disadvantaged situation of their communities and by a series of factors flowing from a history of forced acculturation. These factors include political marginalization, poverty, forced relocations, loss of land and culture, and disruptions to families caused by residential schools and foster-care policies. In some communities, these factors have contributed to an increase in problems that can adversely affect mental health, such as family dysfunction, and physical and/or sexual abuse.

RESULTS

A total of four articles were retrieved from the specific literature search. Three articles were excluded as the subjects were not women reporting depression. One primary Canadian study of “fair” quality was included (Table 8.1). Other related grey literature sources were also utilized.

EPIDEMIOLOGY OF DEPRESSION FOR ABORIGINAL WOMEN

While seven per cent of all Canadians suffered a major depressive episode in 2001, this was true of 12 per cent of First Nation people living off-reserve. (Stewart, D. E., Gucciardi, E., & Grace, S. L., 2004; Statistics Canada, 2002) The prevalence among people living on-reserve
may be even higher. A 1997 survey in Ontario estimated that 16 per cent of adults in First Nation communities met the criteria for major depression - double the Canadian average (18.4 per cent of First Nation women compared to 9.4 per cent other Canadian women) (National Aboriginal Health Organization, 1997). In addition, depressed FN women were more likely to report that it interfered significantly with their activities compared to other Canadian women (27.2% compared to 17.7%) (Stewart, D. E., Gucciardi, E., & Grace, S. L., 2004).

Grace et al. (2003) found a higher ratio of major depression among Aboriginal women and girls than Aboriginal men and boys. In the Ontario First Nations Regional Health Survey (OFNRHS), 9.8 per cent of First Nation women reported that they felt “everything was an effort” all or most of the time, a symptom that is indicative of depressed mood. Over 55 per cent of First Nation women reported physical abuse, and 45.5 per cent reported sexual abuse (Stout, M. D., Kipling, G. D., & Stout, R., 2001). The prevalence of sexual abuse is generally higher among Aboriginal women than non-Aboriginal women (44.8% vs 30.1%). According to Dion (2001), recent studies undertaken in First Nation communities indicate that:

“At least three-quarters of Aboriginal women have been the victims of family violence. Up to 40% of children in some Northern Native Communities had been physically abused by a family member and the abuse of older adults has been identified as a serious problem in some First Nations communities” (Health Canada Nov 1999).

Some recent work investigating the relationship between violence and health, and more specifically the health-related consequences of violence, found associations between violence and mental health problems, substance abuse and suicidal thoughts. Some authors (Stout, M. D., Kipling, G. D., & Stout, R., 2001) suggest that violence should be seen as an obstacle to good health, interacting with other health determinants in complex and multi-variable ways.

Figures on depression among Inuit are more difficult to interpret. According to standard scales used in Statistics Canada surveys, only 3.1 per cent of Inuit suffered a major depressive episode in 2000 - a figure well below the national average - and only 6.4% were at high risk of depression (Stewart, D. E., Gucciardi, E., & Grace, S. L., 2004). According to Abbey (1993), frequency of depression as a presenting problem or diagnosis was higher among Inuit women than men. Clinical experience suggests that depression among these Inuit women may be related to rapid cultural change and their new role in a wage earning economy. A common reason for referral was suicidal thoughts and attempts while the first reason for psychiatric referral of Inuit women was depression. The Abbey study also found a relationship between depression and social stressors such as spousal assault, alcohol abuse and economic privation among Eastern Arctic Inuit women who had psychiatric consultations conducted in the Baffin Islands region of the Northwest Territories (Abbey, S. E., Hood, E., Young, L. T., & Malcolmson, S. A., 1993).

**Suicide**

Suicide rates are consistently higher for the Aboriginal population than for the Canadian population as a whole. These rates vary over the life span, increasing in occurrence over the teenage years, and peaking around age 23 to 25 years (Grace, S. L., 2003). Adolescent women who are status Indians are 7.5 times more likely to commit suicide than adolescent women in the general Canadian population (Grace, S. L., 2003). In the 20- to 29-year age range, the
The Boothroyd study (2001) mentioned that, according to the Royal Commission on Aboriginal peoples, the overall suicide rate among Inuit from 1987 to 1991 was 3.9 times that of the general Canadian population. In this study, the case subjects who died from suicide were more likely to have had a psychiatric diagnosis in their lifetime, the two most common being depression and personality disorder. In the northern Quebec region of Nunavut, the suicide rate among Inuit from 1987 to 1994 was 6.5 times higher than that of the rest of Quebec. The average rate rose from 32.3 per 100,000 from 1982 to 1986 to 121.5 per 100,000 from 1997 to 1999 (Hodgins, S., 1997). The overall male to female ratio for suicide in the Canadian Aboriginal population was approximately 5:1. Continued vigilance of gender-specific rates of suicide and attempted suicide among Inuit persons are required.

**Barriers to Care**

Abbey (1993) suggests that there is a lack of assessment and treatment resources for Inuit women in the Eastern Artic, despite the fact that Inuit women suffer significant mental health problems.

Boothroyd (2001) indicated that almost all of the Inuit people who died from suicide in their study had had contact with health care services at least once in the year before death. Additionally, about one-third saw medical personnel in the month prior to death, but the presenting problem was not necessarily identified as a serious illness or psychiatric condition. There is a lack of detection of those at high risk for depression and consequently, an under-treatment of depression.

Stout et al. (Stout, M. D., Kipling, G. D., & Stout, R., 2001) found that within the Aboriginal health literature, numerous studies highlight the difficulties Aboriginal women face in gaining access to mainstream health and social services systems. Moreover, even when they do make use of such services, they must often contend with racism, cultural insensitivity and lack of Aboriginal personnel (Stewart, P., 2005).

More specifically, Aboriginal women are facing a lack of mental health services due to limited finances, lack of availability of specialists, human resources and geographical location. In some areas, there is a lack of culturally-adapted, community-oriented health care. Additionally, in some Aboriginal communities, the range of resources cannot sufficiently address all socio-economic community challenges.

In conclusion, Aboriginal women have a higher prevalence of depression, of suicide and of suicide attempts, compared to other Canadian women. This may be explained through their increased exposure to violence. Violence has many health-related consequences including mental health problems, substance abuse and suicidal thoughts. Aboriginal women are more greatly affected by family violence, physical and sexual abuse than other Canadian women. The mental health of many Aboriginal people is affected by the economically disadvantaged situation of their communities and by a series of factors flowing from a history of forced acculturation, such as political marginalisation, poverty, forced relocations, loss of land, loss of culture and disruptions to family caused by residential schools and foster-care policies. In some
communities, these factors have contributed to a high proportion of family dysfunction, physical and sexual abuse and other problems that can adversely affect mental health. There is a lack of screening and treatment services in remote Aboriginal communities; moreover, culturally adapted services that address depression and mental health in a holistic approach (e.g., spiritual, mental, intellectual, emotional and physical) and the socio-economic and cultural roots of the problems are required. Numerous studies have highlighted the difficulties that Aboriginal women face in gaining access to the mainstream health and social services. Even when they do make use of such services, they must often contend with racism, cultural insensitivity and lack of Aboriginal personnel. There is a pressing need for programs targeting the emotional sequelae of family violence, sexual abuse and alcoholism. Community-based approaches should be inclusive of the entire Aboriginal community and involve evaluations. Aboriginal women should be engaged in policy-making and research on depression in order to respect the First Nation Ownership, Control, Access and Possession (OCAP) principles of data and research.

Knowledge Gaps

- The need to understand and demonstrate the linkages between depression and life stressors or other social problems such as family violence, sexual abuse etc.
- The need to evaluate and develop evidence-based data on community-based and culturally adapted projects that address depression or a broader scope of well-being.
- The collection of more data on suicide attempts among Aboriginal women and their antecedents.
- The need to further understand the barriers to care and access to mental-health services specific to Aboriginal women e.g. geographical location, cultural, economical, human resources.
- With the transfer of control over health-care services to FN communities, and the growing acceptance of traditional forms of healing, there is a need to evaluate these approaches as effective modalities in improving the status of Aboriginal women's health in Ontario.

Implications for Policy-Makers and Health-Care Providers

Innovative treatments are needed to respond to the complex sociocultural context and the practical limitations of life in isolated northern communities. The support of the health care and social service systems and government in developing and sustaining community initiatives is vital. Abbey (1993) suggests that there is a pressing need for programs to address the emotional sequelae of family violence, sexual abuse and alcoholism. Efforts to empower women to overcome these problems must be community-based, culturally sensitive, and cognizant of the complexities of the changing socio-familial position of Inuit women.
- Boothroyd (2001) suggests a need for detection of those at high risk of depression, for reference to culturally appropriate crisis intervention or prevention programs initiated by and based in the community.
- Mental health must be promoted through fostering coping skills for interpersonal crises, conflict resolution and a positive collective identity.
• A community-based approach to suicide prevention must be inclusive of the entire community members (youth, parents and extended family who have also suffered from the effects of rapid culture change and marginalization).

• Communities may wish to employ a combination of “western” approaches, such as use of psychologists or psychiatrists, as well as self-help groups, land-based camps and activities, and a revival of traditional teachings and spiritual beliefs.
Table 8.1: Characteristics of Included Primary Articles – Aboriginal Women

<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Sample Recruitment</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boothroyd, LJ 2001, Canada</td>
<td>Case-Control: Cases: Inuit who committed suicide (Death Certificates) Control: Inuit (Community)</td>
<td>12–50, 23</td>
<td>71 (Ratio of Men: Women 5:1)</td>
<td>As diagnosed in medical charts by psychiatrists</td>
<td>13.2-Prevalence of depression in case subjects who had committed suicide 8.7-Prevalence of depression in control subjects</td>
<td>Fair</td>
</tr>
</tbody>
</table>
Background

The literature has suggested that immigrants are at greater risk for depression than their native-born counterparts for several years now (Franks, F., & Faux, S. A., 1990). The Canadian Task Force on Mental Health Issues Affecting Immigrants and Refugees (1988) further identified immigrant women at higher risk for depression and other mental illness than men due to a greater incidence of factors associated to mental illness, including failure to find suitable employment, poor English skills, social support issues such as separation from family and community and negative public attitudes. These findings warrant special attention directed at the mental health of immigrant women.

A discussion of the gender differences observed in the prevalence and experience of depression and depressive symptoms among immigrants must take into account cultural variation in the interpretation of mental illness. This information is vital especially in a province as multicultural as Ontario and a country so ethnically diverse as Canada. In 2001, the Canadian population was estimated to comprise over 18 per cent foreign-born, and that of Ontario approximately 26.8 per cent (Statistics Canada, 2001). Moreover, the immigrant population is only part of the picture where ethnic and cultural diversity are concerned: the combined group of first and second generation immigrants constitute over 40 per cent of the Ontario population.

First, this section documents available literature on the prevalence of depression among immigrants in general, providing information on immigrant women as much as possible, and subsequently among subgroups of immigrants by country of origin. Risk factors and predictors for depression among these groups will also be discussed. Aspects of the influence of culture on mental illness are considered throughout. Second, a discussion of the barriers to mental health services for immigrants and different cultural/ethnic groups are discussed, and finally a brief discussion on remaining information gaps and policy implications is provided.

Results

There were 53 articles found from the current literature search for the area of immigrant and ethnic minority women. Of these, seven were deemed eligible for this review of prevalence of depression among immigrants and ethnic minorities: one meta-analysis, two systematic reviews and four primary articles of studies conducted in Canada. Exclusion of articles was primarily necessary due to lack of information on women specifically and lack of ability to derive prevalence or incidence of depression among immigrant and ethnic minority women from the results. The quality of articles included in the prevalence results was deemed to be ‘fair’ (2) or ‘good’ (1) in each case. There were four articles of poor quality (Table 9.1)
Epidemiology of Depression among Immigrant and Ethnic Women

As mentioned, it has long been suggested that immigrants are at increased risk for depression and other mental illness. This is especially documented among those experiencing trauma or migrating under illegal circumstance (e.g. refugees, trafficked persons). (Bhui, K., Mohamud, S., Warfa, N., Craig, T. J., & Stansfeld, S. A., 2003; Gushulak, B. D. & MacPherson, D. W., 2000; Ackerman, L. K., 1997) It has also been documented among certain subgroups of immigrants by country of birth or origin as discussed below. However, there is also contradictory literature showing that, overall, immigrants experience less mental illness than their native counterparts. In a study of recent Canadian data, the Canadian Community Health Survey (CCHS) 2001, (Ali, J. S., McDermott, S., & Gravel, R. G., 2004) lower rates of depression among immigrants, relative to those born in Canada, were found particularly among immigrants from Asia. Rates of having experienced at least one major depressive episode in the 12 months prior to the survey were 6.2 per cent and 8.3 per cent among the immigrants and those born in Canada, respectively. In reviewing literature from outside of Canada, a study of acute admissions to a psychiatric hospital in Norway found similar rates of admissions between immigrants and Norwegians (; Iversen, V. C. & Morken, G., 2003), and many Canadian studies similarly found no difference in mental health outcomes between immigrant and non-immigrant populations, according to the Canadian Task Force on Mental Health Issues Affecting Immigrants and Refugees (1988). These differences in conclusions can likely be explained by differing methodologies (e.g. data sources, study populations - recent vs long-term immigrants, refugees vs non-refugees), but they do provide an example of the rather complex issue of mental health among immigrants.

The body of literature documenting gender differences in mental health among immigrants and various cultural groups can be assumed to be affected by the same contradictions described above. Nevertheless, there is useful literature providing indications of the differences by gender of immigrant mental health. A few primary studies have been conducted within Canada assessing the prevalence of depression and depressive symptoms among specific groups of immigrants. Most of these studies include an assessment of prevalence among women relative to men. Lai has investigated mental health among elderly Asian immigrants to Canada using cross-sectional survey data. A prevalence rate of 21.5 per cent for at least mild depression was found among elderly Taiwanese immigrants, (Lai, D. W., 2005) and rates between 23.2 to 24.2 per cent for depressive symptoms were found among elderly Chinese immigrants. (Lai, D. W., 2004b) Both prevalence rates are higher than the prevalence of depression among the general elderly Canadian population estimated at 10 to 15 per cent. Among both groups of elderly immigrants, Lai found women to have greater prevalence of depression. Among elderly Chinese women, the prevalence of reporting depressive symptoms was 29.3 per cent compared to 17.8 per cent among men. Of note, a meta-analysis of older people in the People's Republic of China found pooled prevalence of depression to be 3.86 per cent (Chen, R., Copeland, J. R., & Wei, L., 1999). A 1.5-time risk of depression in women compared to men was also found, a ratio similar to that found in Lai's studies, albeit at lower levels of depression. Higher rates of depression among elderly Chinese immigrant women relative to their native counterparts are additionally concurred by higher rates of suicide among this population relative to Caucasian women in the United States. (Lai, D. W. L., 2000)
A study of Korean immigrants to Toronto using survey data found 4.5 per cent of the population screened as depressed (Noh, S., Wu, Z., Speechley, M., & Kaspar, V., 1992). Among women alone this rate was found to be 6.7 per cent, a rate significantly different from that of 2.6 per cent among men. The gender-specific rates, however, were similar to those found in Canadian community. A study of Ethiopian immigrants and refugees in Toronto, on the other hand, found higher rates of lifetime prevalence of depression among men than among women (Fenta, H., Hyman, I., & Noh, S., 2004). Overall, a prevalence rate of 9.8 per cent was found among Ethiopian immigrants to Toronto, a rate higher than that found for the general Ontario population of 7.3 per cent. Interestingly, this rate is also notably greater than the rate of lifetime depression estimated for Southern Ethiopia (3.2%). Another study of Iranian immigrants to Canada found no difference in depression rates by gender using survey data (Safdar, S., & Lay, C. H., 2003).

A less recent study of immigrant women from four areas of the world residing in a mid-size southern Ontario city (not identified) found scores suggestive of depression for each greater than that of a general community rate among women (Franks, F., & Faux, S. A., 1990). While the latter is estimated at 20 per cent, rates of 35 per cent, 24 per cent, 48 per cent and 22 per cent were found for Chinese, Vietnamese, Portuguese and Latin American women respectively. Across these ethnic groups, different predictor variables for depression were found.

In general, rates of suicide among immigrants mirror those of depression in that there is a lower rate among immigrants than among the native-born (Malenfant, E. C., 2004). Gender differences in suicide rates among immigrants have been found to be less pronounced than among the native-born (Malenfant, E. C., 2004). Unfortunately, there is also evidence that suicide rates among immigrants in Canada converge with those of the native-born population over time in the country (Kliewer, E. V., & Ward, R. H., 1988). Although a very different population to immigrants to Canada, the African American population in the US, previously exhibiting significantly lower rates of suicide than the rest of the population, are now experiencing a substantial rise in rates, especially among the younger age ranges and the socio-economically disadvantaged (Chance, S. E., Kaslow, N. J., Summerville, M. B., & Wood, K., 1998).

As can be seen above, gender differences in mental health vary by culture, country, ethnicity. In fact, it has been suggested that gender differences are more prominent in developed countries, where the rate ratio of depression among women compared to men is generally known to be about 2:1. On the other hand, in developing countries, the gender differences vary and many report no difference in rates (Culbertson, F. M., 1997).

**Risk Factors of Depression among Immigrant and Ethnic Minority Women**

Available literature on the predictors of depression specifically among immigrant women shows some interesting findings. The aforementioned study of Korean immigrants to Canada was able to pinpoint specific groups of immigrants for which an increased risk of depression was found among women, relative to men. The groups identified were those 36 to 45 years of age, married, having post-secondary education, relatively higher income, employed, originally from Seoul, having lived in Canada for 13 to 15 years, having no Canadian education and planning to return to Korea (Noh, S., Wu, Z., Speechley, M., & Kaspar, V., 1992).
Another study using Canada-wide survey data and assessing emotional problems and psychological distress and their relation to social support measures among elderly immigrants found significant negative relationships (i.e. less social support resulted in more problems and distress), and found immigrant women more likely to perceive the availability of social support than men (Wu, Z., Noh, S., Kaspar, V., & Schimmele, C. M., 2003).

If immigrant women are indeed at greater risk for depression than their male counterparts, other predictors for depression among immigrants as a whole may potentially be additional risk factors for this apparently vulnerable group, warranting a discussion of these risk factors. Racial discrimination, whether real or perceived, has been shown to be related to depression. Interestingly, ethnic identity has been shown to moderate this effect. In other words, greater identification with one’s ethnicity of origin reduces the occurrence of depression among immigrants or ethnic minorities experiencing discrimination (Gaudet, S., Clement, R., & Deuzeman, K., 2005; Fenta, H., Hyman, I., & Noh, S., 2004; Noh, S., Beiser, M., Kaspar, V., Hou, F., & Rummens, J., 1999). In a study of Somali immigrant women to Canada, loss of ethnic identity seemed to play a role in the greater severity of depression among younger women (Young, M., 1996). The study of elderly Chinese immigrants, while concurring that greater identification with ethnic identity is associated with lower levels of depressive symptoms, also found higher levels of identification with Chinese cultural values to be associated with higher levels of depressive symptoms (Lai, D. W., 2004a).

**Impact of Culture on Depressive Symptoms of Elderly Chinese Immigrants**

It could be that, while ethnic identity creates a sense of belonging, the holding of Chinese cultural values results in a barrier to mental health. Other predictors of depression found in this study included living alone, older age, single status, less financial adequacy, religious belief, lower levels of education, lower levels of social support and less monthly income. Lower levels of income and education are predictors for depression among immigrants corroborated elsewhere (Fenta, H., Hyman, I., & Noh, S., 2004).

The risk for depression among immigrants does appear to change with time in a new country, however, the change does not appear consistent from one group to the next. Generally, the risk of depression appears to diminish after living for some time in the host country. A ten-year longitudinal study of mental health among refugees found that risk of depression decreased over length of time spent in Canada (Beiser, M., & Hou, F., 2001). This particular study, which followed Southeast Asian refugees for up to three points in time, found gender differences in this phenomenon: women were more likely than men to experience depression in the later follow-up period, while men exhibited symptoms earlier in the follow-up. In the same study, it was found that decreased English language proficiency as measured in the third follow-up point was associated with increased prevalence of depression among women, while this was not observed among men. The study suggests unemployment is an important problem among refugees to Canada, as refugees admitted for compassionate reasons may not have employable backgrounds. A relationship between unemployment and depression was found among men only and this at the third follow-up point. Cross-sectional studies of immigrants to Canada produce contradictory results regarding changing risk of depression with length of time in a new country. Highest levels of depression were found among most recent immigrants in the
study of elderly Chinese immigrants to Canada (Lai, D. W., 2004a). On the other hand, the
study of Ethiopian immigrants living in Toronto showed lower levels of depression among
most recent immigrants, increasing after a few years and peaking at 15 years post-migration.
Subsequently, levels decreased and remained low (Fenta, H., Hyman, I., & Noh, S., 2004).

Within the above mentioned Canadian study of survey data, (Ali, J. S., McDermott, S., &
Gravel, R. G., 2004) highest rates of depression existed among both immigrants who had
been in Canada 30 years or longer, and European immigrants. In fact, the latter group had
significantly greater rates of depression than the Canadian-born. These two observations
could be correlated, given that earlier cohorts of immigrants to Canada tended to be European.
This, however, points to potential greater vulnerability to depression among specific ethnic
groups relative to others. This is corroborated by other Canadian data suggesting Asian and
black Canadians may have better mental health than English Canadians, while Jewish
Canadians have poorer mental health (Wu, Z., Noh, S., Kaspar, V., & Schimmele, C. M.,
2003). There is also some literature showing that women of colour in the United States are
more at risk for depression than other women (Barbee, E. L., 1992). This could be due to a
greater number of socio-economic risk factors for depression among women of colour, including
racial/ethnic discrimination, lower educational and income levels, unemployment, marital
dissolution, single parenthood (McGrath, E., Keita, G. P., Stickland, B. R., & Russo, N. F.,
1990) and violence (Barbee, E. L., 1992).

As mentioned, there is significant literature documenting the increased risk of depression and
other mental health problems among refugees, particularly those experiencing pre-migration
trauma, including torture, rape or other violence, refugee camp internment. The Norwegian
study referred to, above, revealed greater rates of hospital admissions among asylum seekers
(Iverson, V. C., & Morken, G., 2003). A review of the mental health of refugees and immi-
grants to Canada, (Beiser, M., & Edwards, R. G., 1994) based largely on the experiences of
Southeast Asian refugees, showed that exposure to catastrophic stress such as torture and rape
leads to post-traumatic stress disorder. Extended separation from family members is also sug-
gested to have a harmful psychological impact (Rousseau, C., Moreau, S., Drapeau, A., &
Marcotte, C., 1997).

**Barriers to Care for Depression in Immigrant and Ethnic Women**

Despite the established greater need for mental health services among refugees and asylum
seekers mentioned above, in addition to a potential greater need among immigrants as a whole
or subgroups, the literature documents under-utilization of mental health services by ethno-
racial groups in North America (Chen, A. W., & Kazanjian, A., 2005; Williams, C. C., 2001;
Roberts, N. & Crockford, D., 1997). One article further summarizes barriers to these services,
including culturally insensitive or offensive services, language barriers between service providers
and service recipients, service locations distant from ethno-racial communities, inconvenient
operating hours, waiting lists and lack of information about services (Williams, C. C., 2001).
This list is corroborated by other studies, which additionally include lack of trust of English-
speaking clinicians, concern about side-effects of western medications and perceived or real
racial discrimination among identified barriers to mental health services and appropriate care
(Sadavoy, J., Meier, R., & Ong, A. Y., 2004; Phan, T., 2000; Lim, D., Sanderson, K., &
Culture can play a large role in the accessing of mental health services among second-generation immigrants. A study of psychiatric admissions of second-generation Asian Canadian adolescents revealed fewer admissions than expected (Roberts, N., & Crockford, D., 1997). No difference by gender was observed. Although there is a possibility of lower prevalence of psychiatric problems among this group, more recent literature has found that lower referral rates for admission may be linked to “parental attitudes and perceptions of psychiatric illness instead”. The article purports that studies focusing on Asians have found that great importance is placed on immediate, and, extended family in resolving conflicts within the family, thus deterring outside help-seeking behaviour. Additionally, there may concerns of conflict between their own values and those of the mainstream health system, as well as the general concern of stigma associated with mental illness. One study investigating the mental health of Vietnamese refugees suggests “mental health problems are so highly stigmatized by the Vietnamese that it is difficult even to discuss these issues without provoking feelings of shame” (Gold, S. J., 1992).

Even once accessed, the health system in Canada as it currently stands may not best serve immigrant and ethnic minority populations with regard to mental health. A study specific to barriers to accessing adequate mental health services for ethnic seniors in Toronto identified inadequate numbers of trained and acceptable mental health workers, especially psychiatrists, limited awareness of mental disorders among both potential service providers and receivers, reliance on ethno-specific social agencies that are not designed or funded for formal mental health care and inappropriate referral patterns (Sadavoy, J., Meier, R., & Ong, A. Y., 2004).

Lack of recognition of mental health problems due to cultural variations in clinical presentation has been examined as an additional barrier to adequate mental health care. Culture and ethnicity play large roles in any discussion about mental health. “Culture influences the sources of distress, the form of illness experience, symptomatology, interpretation of symptoms, modes of coping with distress, help-seeking and the social response to distress and disability” (Kirmayer, L. J., 2001). As an example, studies of depression among black West Indian Canadian women have documented a common response for managing the condition, namely “being strong”, characterized by concealing vulnerability and private suffering (Schreiber, R., Stern, P. N., & Wilson, C., 2000). If not properly recognized, such responses can lead to missed or incorrect diagnosis among immigrants or members of cultural/ethnic groups differing from the mainstream.

A report on the evaluation of a “cultural consultation service” for mental health practitioners and primary care clinicians identified several repeated consequences of cultural misunderstandings in mental health services. These included “incomplete assessments, incorrect diagnoses, inadequate or inappropriate treatment and failed treatment alliances” (Kirmayer, L. J., Groleau, D., Guzder, J., Blake, C., & Jarvis, E., 2003).

Knowledge Gaps

- There is a need to develop better measurements of discrimination.
- There is a need to further explore the preventative nature of ethnic identity towards depression.
- There is a need to investigate whether or not traditional mental health practices of the immigrant community could work in a complementary fashion with mainstream services (Phan, T., 2000).
Further investigation of mental health service utilization among immigrants at different lengths of time after arrival in Canada might help to elucidate why overall service utilization appears lower among immigrants despite a possible greater need.

The literature on the mental health issues of immigrants to Canada would be clarified from a study that can examine the mental health of several immigrant subgroups, in order to identify those at greatest risk with respect to other immigrants and compared to other Canadians.

**Implications for Policy-makers and Health-Care Providers**

- The need for bilingual and bi-cultural mental health professionals in different sectors, such as community mental health centres and major hospitals.
- New immigrants can be informed of Canada’s mental health system through existing social services (such as English classes).
- Change within Canadian mental health care organizations is suggested based on diversity, multiculturalism and anti-racism.
- Education programs such as training, self-study or professional development activities should be targeted towards mental health professionals on the basis of cultural norms and values regarding mental health issues in various minorities.
- The need to encourage a uniqueness to each practitioner’s approach to patients seeking mental health services, one that considers the patient’s gender, ethnicity, culture, religion, health beliefs, etc. and makes use of this information in achieving successful outcomes in mental health.
<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Sample Recruitment, Instruments</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Other Results</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lai, DWL 2005, Canada</td>
<td>Cross-sectional: Chinese Population</td>
<td>55–101, 68</td>
<td>98 Women and Men</td>
<td>GDS</td>
<td>21.5-Point prevalence of mild to severe depression in Taiwanese participants 8.2-Point prevalence of moderate to severe depression in Taiwanese participants</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>Safdar, SF 2003, Canada</td>
<td>Cross-sectional: Iranian Immigrants Toronto, Ontario</td>
<td>18–69, 34</td>
<td>79</td>
<td>BDI</td>
<td>Mean BDI score 4.3 in Iranian immigrants, SD 3.6; Range 0-19, No differences by sex</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>Lai, DWL 2000, Canada</td>
<td>Cross-sectional: Chinese Population Calgary, Alberta</td>
<td>65–88, 72</td>
<td>56</td>
<td>GDS</td>
<td>28.8-Point prevalence of mild to severe depression in women</td>
<td>Fair</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: BDI – Beck Depression Inventory  
GDS – Geriatric Depression Schedule
CHAPTER 10: SPECIAL GROUPS – INTIMATE PARTNER VIOLENCE

C. Nadine Wathen, Jana M. Fear, and Sonya Strohm

Background

Since the 1970s, spousal violence has increasingly been recognized as associated with significant morbidity and mortality, particularly among women (Chalk, R. & King, P., 1998). This section will focus on the relationship between a woman’s exposure to intimate partner violence and the risk of developing or having depression.

The Centers for Disease Control (2005) defines intimate partner violence against women (IPV) as any behaviour purposely inflicted by a male or female partner against a woman within an intimate relationship that causes physical, psychological or sexual harm. Such behaviour includes acts of physical aggression, psychological or emotional abuse, as well as forced intercourse and other forms of sexual coercion. IPV is strongly associated with depression in women (Hegarty, K., Gunn, J., Chondros, P., & Small, R., 2004; Nixon, R. D., Resick, Patricia A., & Nishith, P., 2004; Wathen, C. N. & MacMillan, H. L., 2003; Fischbach, R. L. & Herbert, B., 1997), with many studies suggesting that depression is one of the key mental health consequences of abuse by an intimate partner (Nicolaidis, C., Curry, M., McFarland, B., & Gerrity, M., 2004; McCauley, J. et al., 1995).

Results

A search of the literature yielded ten articles, one of which met eligibility criteria of ‘fair’ quality (Table 10.8). Therefore, the primary sources of data for this section are: 1) the Statistics Canada report of relevant 1999 General Social Survey results on IPV; 2) specific individual studies providing Ontario- and Canada-specific data on relevant aspects of the relationship between IPV and depression, or characteristics that may place women at higher risk of one, or the other, or both concurrently; 3) the sole meta-analysis in the published literature that examines the relationship between IPV and depression; and 4) specific studies that discuss the barriers to and costs of health care seeking in women exposed to IPV. Articles excluded did not discuss women and depression in relation to intimate partner violence.

Epidemiology of Depression among Women Exposed to Violence

Prevalence of intimate partner violence

The 1999 General Social Survey (GSS) was Statistics Canada’s first attempt to systematically and comprehensively measure spousal violence (Statistics Canada, 2000).1 The five-year national rate for male-to-female spousal violence was eight per cent - that is, eight per cent of women reported being exposed to this kind of violence in the past five years. In Ontario, the rate was 7.4 per cent (Cohen, M. M., & Ansara, D., 2002; Statistics Canada, 2000). A complete report on the prevalence and impact of IPV in Ontario, as compared to the rest of Canada and internationally, is available in the Ontario Women’s Health Status Report.
Violence surveys in the US generally place lifetime prevalence of intimate partner violence against women at between 25% and 30%, and annual prevalence at between approximately two per cent and 12 per cent (Tjaden, P., & Thoennes, N., 2000; Jones, A. S. et al., 1999), with the variability depending on what types of abuse are included in the survey questions. Data from clinical samples (e.g., from US emergency departments) often place these point estimates much higher, but these must be interpreted with caution given the limitations of many of these samples.

In terms of the consequences of IPV, analyses from the 1999 GSS indicate that women were three times more likely to suffer injury (40% vs. 13%) and five times more likely than men to receive medical care (15% vs. 3%) as a result of spousal violence. The survey also measured emotional abuse and controlling behaviour, including financial abuse/control, as separate from physical violence. This was not included in the overall rates of spousal violence reported above. Nineteen per cent of women reported this type of abuse, which was found to be highly correlated with physical violence: five-year rates of violence were ten times greater for women in emotionally abusive situations than for those who did not report emotional abuse. In general, women suffer more serious negative emotional consequences of abuse, and are far less likely to report that abuse had “not much” effect (5% for women, 22% for men) (Statistics Canada, 2000).

Trends of spousal violence are difficult to determine and depend on what data sources (i.e. police reports vs. victimization surveys) are used (Johnson, B. R., 2000). In general, in comparing data from the 1993 Violence Against Women Survey to similar data from the 1999 GSS, there is a small but significant decrease in incidence of wife assault (from 12% to 8% in five-year rates) and severity of the violence, with a seven per cent (from 50% to 43%) drop in the proportion of women reporting more serious forms of violence (Johnson, B. R., 2000). Similar trends have been found in police-reported incidence of violence in recent Canadian surveys (Statistics Canada, 2004).

**IPV and Depression**

This section presents data from the only currently available evidence synthesis that has systematically examined the relationship between IPV and depression. Golding (1999) conducted a meta-analysis, rated of ‘fair’ quality, to quantify the extent of the relationship between exposure to IPV in women and mental health impairment. Her results, which included data from clinical and general population samples, indicated strong associations for a range of disorders including suicidality, post-traumatic stress disorder (PTSD), and alcohol and drug abuse/dependence. The majority of the studies included in the meta-analysis were cross-sectional.

In terms of the depression outcomes, Golding analysed 18 studies that reported rates of depression among abused women. The weighted mean prevalence rate of depression was 47.6 per cent, which is much higher than depression in the general population (Section 1). The weighted mean odds ratio for risk of depression in abused versus non-abused women was 3.80 (95% CI 3.16-4.57). In addition to providing the overall prevalence rate, Golding also examined specific features of the studies from which her data were drawn. For example, she found that sampling was highly correlated with depression, with samples drawn from women’s shelters having the highest per centage of depressed women (~61%) followed by those from the general

---

1 The GSS was replicated in 2004 and results are awaited.
population/primary care settings (44%), emergency departments (41%), psychiatric care settings (39%), and general population respondents to fliers (18%). Other interesting findings noted by Golding include a seeming temporal association between abuse and depression, with women in three of the studies she analysed showing decreasing depression as they moved farther, in time, from the abusive episode(s). Similarly, several of the studies indicated that severity or prevalence of depression was significantly associated with severity or duration of violence, with more severe/prolonged abuse associated with more and/or more severe depression.

Again, however, Ontario and Canadian population-based rates of concurrent IPV and depression are unavailable, and this remains a research gap.

**Risk Factors for Depression among Women Exposed to Violence**

### Demographic Indicators Related to IPV Exposure

Canadian population data (Statistics Canada, 2000), and the relevant Ontario-specific data (Cohen, M. M., & Ansara, D., 2002) indicate that the following demographic characteristics are related to a higher likelihood of exposure to IPV:

- Being younger (women under age 25 were 5 times more likely to report abuse than women 45 and older); refer to Table 10.1
- Being in a common-law union, compared to a legal marriage (a rate of 4:1); refer to Table 10.7
- Having lower family income, especially under $30,000 per year; refer to Table 10.7
- Urban versus rural location of residence (higher for urban); refer to Table 10.2
- Aboriginal status (samples too small for Ontario-specific data); refer to Table 10.3
- Being born in Canada; refer to Table 10.4
- Being a single parent (with most of the abuse perpetrated by the former husband/partner); refer to Table 10.5

Characteristics not associated with increased rates of violence included:

- Level of education (Canadian data); refer to Table 10.7
- Visible minority status; refer to Table 10.6

These data are not provided according to depression status.

### Violence during Pregnancy

Pregnancy has been identified as a time when a woman can be particularly vulnerable to both abuse and depression. However, no population-based data exist that provide Canadian or Ontario estimates of the prevalence of IPV, with or without depression, during pregnancy (MacMillan, H. L., 1999). In terms of rates of IPV during pregnancy, a study conducted with a sample of 543 pregnant women in Saskatoon, Saskatchewan (Muhajarine, N., & D’Arcy, C., 1999) found estimated population rates of 4.5 per cent and 6.2 per cent in the year preceding the second trimester interview. These rates are slightly lower than those reported in a previous Canadian study (Stewart, D. E. & Cecutti, A., 1993), which found an unadjusted prevalence of 6.6% (36/548) for abuse during pregnancy and 10.9 per cent (60/548) for abuse preceding pregnancy.
These Canadian data fall within the range reported for studies outside of Canada. In a synthesis of such studies, Gazmararian and colleagues (1996) found rates of abuse ranging from 0.9 per cent to 20.1 per cent. The variability is indicative of some of the problems inherent in collecting and standardizing this kind of data, including when and how the questions are asked, and in what populations (Ballard, T. J. et al., 1998). Martin and colleagues (2001) found pre-pregnancy abuse rates of 6.9 per cent and pregnancy rates of 6.1 per cent. Reports of physical violence during pregnancy have been significantly associated with pre-term labour, trauma due to a fall or abdominal blow, and Caesarean delivery (Cokkinides, V. E., & Coker, A. L., 1998). Assessment of concurrent rates of IPV and depression during pregnancy in the Ontario and Canadian contexts remains a research gap.

### Table 10.1 Number and Per cent of Women Aged 15 and Over Experiencing Violence by Current or Previous Spouse in Past Five Years by Severity of Violence and by Age Group: Ontario and Canada (Cohen, M. M., & Ansara, D., 2002)

<table>
<thead>
<tr>
<th>Type of Violence</th>
<th>Ontario</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. (000s)</td>
<td>%</td>
</tr>
<tr>
<td><strong>Non-severe</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15–24</td>
<td>18</td>
<td>(20.3)†</td>
</tr>
<tr>
<td>25–34</td>
<td>85</td>
<td>(13.5)</td>
</tr>
<tr>
<td>35–44</td>
<td>70</td>
<td>(8.6)</td>
</tr>
<tr>
<td>45–54</td>
<td>24</td>
<td>(3.9)†</td>
</tr>
<tr>
<td>55+</td>
<td>14</td>
<td>(1.8)†</td>
</tr>
<tr>
<td><strong>Severe</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15–24</td>
<td>9</td>
<td>(9.5)‡*</td>
</tr>
<tr>
<td>25–34</td>
<td>54</td>
<td>(8.6)</td>
</tr>
<tr>
<td>35–44</td>
<td>44</td>
<td>(5.5)†</td>
</tr>
<tr>
<td>45–54</td>
<td>9</td>
<td>(1.5)‡*</td>
</tr>
<tr>
<td>55+</td>
<td>7</td>
<td>(0.9)‡*</td>
</tr>
</tbody>
</table>

**Data source:** Statistics Canada, General Social Survey, 1999.

† Coefficient of variation is high (16.6% to 33.3%)

‡ Coefficient of variation is very high (33.4% and over)

**Number of women respondents in this group is less than 15**

### Table 10.2 Number and Per cent of Women Aged 15 and Over Experiencing Violence by Current or Previous Spouse in Past Five Years by Severity of Violence by Urban/Rural Residence: Ontario and Canada (Cohen, M. M., & Ansara, D., 2002)

<table>
<thead>
<tr>
<th>Type of Violence</th>
<th>Ontario</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. (000s)</td>
<td>%</td>
</tr>
<tr>
<td><strong>Non-severe</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>178</td>
<td>(7.6)</td>
</tr>
<tr>
<td>Rural*</td>
<td>33</td>
<td>(6.0)†</td>
</tr>
<tr>
<td><strong>Severe</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>103</td>
<td>(4.4)</td>
</tr>
<tr>
<td>Rural*</td>
<td>21</td>
<td>(3.8)†</td>
</tr>
</tbody>
</table>

**Data source:** Statistics Canada, General Social Survey, 1999.

† Coefficient of variation is high (16.6% to 33.3%)

* Includes rural areas and Prince Edward Island
### Table 10.3 Number and Per cent of Women Aged 15 and Over Experiencing Violence by Current or Previous Spouse in Past Five Years by Severity of Violence and by Aboriginal Status: Canada (Cohen, M. M., & Ansara, D., 2002)

<table>
<thead>
<tr>
<th>Type of Violence</th>
<th>No. (000s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-severe</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aboriginal</td>
<td>44</td>
<td>(25.5)</td>
</tr>
<tr>
<td>Non-Aboriginal</td>
<td>615</td>
<td>(8.0)</td>
</tr>
<tr>
<td><strong>Severe</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aboriginal</td>
<td>30</td>
<td>(17.4)†</td>
</tr>
<tr>
<td>Non-Aboriginal</td>
<td>343</td>
<td>(4.4)</td>
</tr>
</tbody>
</table>

**Data source:** Statistics Canada, General Social Survey, 1999.
† Coefficient of variation is high (16.6% to 33.3%)

### Table 10.4 Number and Per cent of Women Aged 15 and Over Experiencing Violence by Current or Previous Spouse in Past Five Years by Severity of Violence and Place of Birth: Ontario and Canada (Cohen, M. M., & Ansara, D., 2002)

<table>
<thead>
<tr>
<th>Type of Violence</th>
<th>No. (000s)</th>
<th>%</th>
<th>No. (000s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-severe</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Born in Canada</td>
<td>152</td>
<td>(7.7)</td>
<td>562</td>
<td>(8.8)</td>
</tr>
<tr>
<td>Not born in Canada</td>
<td>53</td>
<td>(5.9)†</td>
<td>96</td>
<td>(6.2)</td>
</tr>
<tr>
<td><strong>Severe</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Born in Canada</td>
<td>89</td>
<td>(4.5)</td>
<td>319</td>
<td>(5.0)</td>
</tr>
<tr>
<td>Not born in Canada</td>
<td>32</td>
<td>(3.6)†</td>
<td>52</td>
<td>(3.4)</td>
</tr>
</tbody>
</table>

**Data source:** Statistics Canada, General Social Survey, 1999.
† Coefficient of variation is high (16.6% to 33.3%)

### Table 10.5 Number and Per cent of Women Aged 15 and Over Experiencing Violence by Current or Previous Spouse in Past Five Years by Severity of Violence and Marital Status: Ontario and Canada (Cohen, M. M., & Ansara, D., 2002)

<table>
<thead>
<tr>
<th>Type of Violence</th>
<th>No. (000s)</th>
<th>%</th>
<th>No. (000s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-severe</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single parent</td>
<td>66</td>
<td>(39.9)</td>
<td>179</td>
<td>(38.5)</td>
</tr>
<tr>
<td>Married</td>
<td>65</td>
<td>(5.2)</td>
<td>219</td>
<td>(6.4)</td>
</tr>
<tr>
<td><strong>Severe</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single parent</td>
<td>48</td>
<td>(29.1)</td>
<td>131</td>
<td>(28.3)</td>
</tr>
<tr>
<td>Married</td>
<td>29</td>
<td>(2.3)†</td>
<td>97</td>
<td>(2.8)</td>
</tr>
</tbody>
</table>

**Data source:** Statistics Canada, General Social Survey, 1999.
† Coefficient of variation is high (16.6% to 33.3%)
Relationship Between IPV Exposure and Mental Health

Women exposed to partner violence are at increased risk of injury and death, as well as a range of physical, emotional and social problems (Eisenstat, S. A., & Bancroft, L., 1999). Impairment in mental health is often considered a consequence of exposure to IPV in women, yet most of

Table 10.6 Number and Per cent of Women Aged 15 and Over Experiencing Violence by Current or Previous Spouse in Past Five Years by Severity of Violence and Visible Minority Status: Ontario and Canada (Cohen, M. M., & Ansara, D., 2002)

<table>
<thead>
<tr>
<th>Type of Violence</th>
<th>Ontario (000s)</th>
<th>%</th>
<th>Ontario (000s)</th>
<th>%</th>
<th>Canada (000s)</th>
<th>%</th>
<th>Canada (0000s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-severe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visible minority</td>
<td>25</td>
<td>(7.1)†</td>
<td>51</td>
<td>(7.9)</td>
<td></td>
<td></td>
<td>607</td>
<td>(8.4)</td>
</tr>
<tr>
<td>Non-visible minority</td>
<td>181</td>
<td>(7.2)</td>
<td>607</td>
<td>(8.4)</td>
<td></td>
<td></td>
<td>345</td>
<td>(4.8)</td>
</tr>
<tr>
<td>Severe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visible minority</td>
<td>13</td>
<td>(3.7)‡</td>
<td>26</td>
<td>(4.0)†</td>
<td></td>
<td></td>
<td>345</td>
<td>(4.8)</td>
</tr>
<tr>
<td>Non-visible minority</td>
<td>109</td>
<td>(4.3)</td>
<td>345</td>
<td>(4.8)</td>
<td></td>
<td></td>
<td>345</td>
<td>(4.8)</td>
</tr>
</tbody>
</table>

† Coefficient of variation is very high (33.4% and over)
‡ Coefficient of variation is high (16.6% to 33.3%)

Table 10.7 One-Year Rates of Spousal Violence by Personal Characteristics, Current Victims: Canada (Statistics Canada, 2000)

<table>
<thead>
<tr>
<th>Type of Violence</th>
<th>Total (000s)</th>
<th>%</th>
<th>Female (000s)</th>
<th>%</th>
<th>Male (000s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total violence by a current partner</td>
<td>250</td>
<td>2</td>
<td>120</td>
<td>2</td>
<td>129</td>
<td>2</td>
</tr>
</tbody>
</table>

Type of Union

<table>
<thead>
<tr>
<th>Type of Union</th>
<th>Total (000s)</th>
<th>%</th>
<th>Female (000s)</th>
<th>%</th>
<th>Male (000s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>172</td>
<td>1</td>
<td>85</td>
<td>1</td>
<td>88</td>
<td>1</td>
</tr>
<tr>
<td>Common-law</td>
<td>77</td>
<td>4</td>
<td>36</td>
<td>4†</td>
<td>41</td>
<td>4†</td>
</tr>
</tbody>
</table>

Household income

<table>
<thead>
<tr>
<th>Household income</th>
<th>Total (000s)</th>
<th>%</th>
<th>Female (000s)</th>
<th>%</th>
<th>Male (000s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $30,000</td>
<td>58</td>
<td>3</td>
<td>35</td>
<td>3†</td>
<td>23</td>
<td>3†</td>
</tr>
<tr>
<td>$30,000-$59,999</td>
<td>85</td>
<td>2</td>
<td>40</td>
<td>2†</td>
<td>45</td>
<td>2†</td>
</tr>
<tr>
<td>$60,000 or more</td>
<td>66</td>
<td>1</td>
<td>21</td>
<td>1†</td>
<td>45</td>
<td>2†</td>
</tr>
<tr>
<td>Not stated/Don’t know</td>
<td>41</td>
<td>1†</td>
<td>25</td>
<td>1†</td>
<td>16</td>
<td>1†</td>
</tr>
</tbody>
</table>

Education

<table>
<thead>
<tr>
<th>Education</th>
<th>Total (000s)</th>
<th>%</th>
<th>Female (000s)</th>
<th>%</th>
<th>Male (000s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>48</td>
<td>2</td>
<td>27</td>
<td>2†</td>
<td>21</td>
<td>2†</td>
</tr>
<tr>
<td>High school diploma</td>
<td>35</td>
<td>2†</td>
<td>17</td>
<td>1†</td>
<td>18</td>
<td>2†</td>
</tr>
<tr>
<td>Some post secondary</td>
<td>112</td>
<td>2</td>
<td>54</td>
<td>2</td>
<td>58</td>
<td>2</td>
</tr>
<tr>
<td>University degree</td>
<td>49</td>
<td>2</td>
<td>21</td>
<td>1†</td>
<td>27</td>
<td>2†</td>
</tr>
<tr>
<td>Not stated/Don’t know</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

† Coefficient of variation is high (16.6% to 33.3%).
– Amount too small to be expressed.
† Subgroups of the population do not always equal the total population due to rounding and unreporting.

Data source: Statistics Canada, General Social Survey, 1999

2 Some post secondary includes diploma or a certificate from a community college.
the studies that purport to address this question are cross-sectional in nature, and therefore can only provide information about emotional problems associated with exposure. While most of these studies are based on clinical samples that may be subject to selection bias, Danielson and colleagues (1998) examined the relationship between exposure to domestic violence and risk of DSM-III-R mental disorders in a community sample (n = 941 adults aged 21 years). Women exposed to “any” partner violence reported significantly increased rates of mood (odds ratio (OR) 2.0) and eating disorders (OR 5.5). Those exposed to severe partner violence had increased rates of mood (OR 2.74), eating (OR 4.6), substance dependence (OR 2.8) and antisocial personality disorders (OR 15.6), as well as nonaffective psychosis (OR 3.7).

Sutherland and colleagues (1998), as part of an intervention trial, examined the health of women (N = 141) immediately after leaving a domestic violence shelter, and at follow-up 8.5 and 14.5 months later. As expected, higher rates of abuse were associated with higher levels of injuries, as well as other physical and emotional health problems, such as anxiety and depression. The relationship between exposure to abuse and physical health symptoms appeared to be mediated through anxiety and depression, but not through injuries. Previous exposure to abuse appeared to have an ongoing effect on physical and emotional health, even if recent abuse declined.

A one-year follow-up study of women presenting to the emergency department of an Australian public hospital (n = 358) looked at the mental health of women who reported domestic violence compared to those without such a history (Roberts, G. L., Williams, G. M., Lawrence, J. M., & Raphael, B., 1998). Women with a history of domestic violence had significantly higher rates of depression, anxiety, somatization, substance abuse/dependence and dissociation, compared to those who reported no domestic violence.

### Barriers to Care for Depression in Women Exposed to Violence

Women experiencing IPV who are depressed may face additional barriers to seeking and receiving treatment, as oversight by the abusive partner, including blocking access to all forms of potential help, is a characteristic of the constellation of controlling behaviours typical in abusive situations. The extent of the barriers to health care faced by women with depression who are experiencing violence may differ according to several inter-related factors, including the type and severity of abuse and the type and severity of depressive symptomology and co-morbid mental and physical health conditions that also frequently occur as a result of IPV. Unfortunately, there are no studies that specifically discuss the barriers faced by women with depression as a result of their exposure to violence. However, some studies have examined health care use and barriers to help- and health-seeking among abused women more generally (many of whom, as indicated above, will also be experiencing depressive disorders). This section summarizes the available literature on patterns of health care use among women exposed to IPV, as well as barriers to help- and health-seeking faced by these women.

### Patterns of Health Care Use by Women Exposed to Violence

Women exposed to IPV have been found to use health-care services such as physician and emergency room visits, and hospitalizations significantly more frequently than those without such exposure. (Coker, A. L., Reeder, C. E., Fadden, M. K., & Smith, P. H., 2004; Centers

There is no data specific to the health services utilization or costs of depression specifically related to IPV exposure, in fact the analyses of this particular aspect of health service use is often confounded by the highly inter-related nature of these two phenomena. As Ulrich et al. (2003) point out: “…people with depression are likely to be high users of care whether they experience underlying [domestic violence (DV)] or not. Our data do not permit us to delineate, in any given individual, how much increased utilization is from DV-related depression visits versus how much is from depression without any influence from DV.” (p. 10)

**Barriers to Help-seeking and Health Care Use for Women Exposed to Violence**

Women exposed to IPV face a number of barriers to accessing health care and other forms of assistance. These, coupled with the barriers faced more generally by women with depression (see Section 3), present significant challenges to women living in violent situations who suffer from depressive disorders. In general, a relatively small percentage of abused women seek help from formal agencies (DuMont J., Forte, T., Cohen, M. M., Hyman, I., & Romans, S., 2005; Rodgers, K., 1994); when women do seek help, they do so from a variety of informal and formal sources. Data from an Ontario study of abused women's help-seeking strategies indicated that about 25 per cent of these women seek help from hospital emergency departments (Harris, R. et al., 2001).

A recent study by Dumont and colleagues (2005) reviews the existing literature on abused women's health-seeking, and states:

> Other reasons women do not disclose or seek help subsequent to being abused identified in the research literature include: fears for safety, lack of knowledge about appropriate sources of support, concerns about losing custody of their children; fear of retaliation by the abuser, reluctance to involve police, prohibitive costs, long waiting times, lack of trust in health care provider; lack of privacy, time constraints, continuity of care; self-reliance, having left the abusive partner, shame and embarrassment, the perception that doctors can not help or are there to deal only with physical problems, and the inability to talk to a male doctor. Among abused immigrant women specifically, social isolation, language barriers, discrimination, and fears of deportation were among the most common reasons given for not using services. (p. 4).

In this study, Dumont and colleagues also examined trends in help-seeking by abused women in Canada, comparing the 1993 Violence Against Women Survey (VAWS) and the violence-specific questions on the 1999 General Social Survey (GSS). Their results indicate that while women in the latter survey are significantly more likely to disclose the abuse to someone (81% versus 73%), the majority (68%) do not disclose it to a health-care provider. The primary recipients of such disclosures are friends, family members and neighbours (about 2/3 of the 1999 sample), although these are not seen by all women as uniformly helpful (Rose, L. E., Campbell, J., & Kub, J., 2000). Similarly, women in the 1999 survey were more likely to use formal services
when seeking help for their abusive situation (49% versus 24.5%). In terms of reasons for not accessing formal help, significantly fewer women in the 1999 survey cited lack of awareness or lack of service availability, and significantly more women indicated they felt they did not want or need help (49% versus 42%); the per centage of women citing shame or embarrassment as a barrier to seeking help increased from 6.4 per cent to 8.9 per cent, which was not statistically significant (DuMont J., Forte, T., Cohen, M. M., Hyman, I., & Romans, S., 2005).

Other studies that have examined barriers to health-seeking cite women’s concerns about potential negative consequences of disclosure to health professionals via routine screening, including fears about the effects of mandatory reporting to child protection authorities of suspected cases of children witnessing violence in the home, feelings of embarrassment, lack of empathy by the health care provider, fear of reprisal violence by the abuser, and the expectation that she will be required to leave the abuser (Fugate, M., Landis, L., Riordan, K., Naureckas, S., & Engel, B., 2005; Kramer, A., Lorenzon, D., & Mueller, G., 2004; Petersen, R., Moracco, K. E., Goldstein, K. M., & Clark, K. A., 2004; Gielen, A. C. et al., 2000; Rodriguez, M. A., Bauer, H. M., McLoughlin, E., & Grumbach, K., 1999).

In conclusion, intimate partner violence against women is prevalent in Ontario, with population-based rates similar to those in the wider Canadian population, and internationally. There is evidence that exposure to IPV is significantly related to depression in women, with data from the sole meta-analytic study indicating that up to 50 per cent of women exposed to violence are concurrently depressed. Groups of women at increased risk of IPV include those who are younger and in common-law relationships, those with lower family incomes, and those living in urban areas. First Nations women are also at increased risk (Canada-wide data), as are single mothers. Factors not associated with IPV in Canadian and Ontario population-based samples include a woman’s level of education (Statistics Canada, 2000) and her visible minority status (Cohen, M. M., & Ansara, D., 2002). However there is no data linking depression rates in these sub-groups to abuse status.

Women experiencing violence face additional barriers to seeking health care, and help more generally, including fear of retaliatory violence from the abuser, fear that disclosure of violence in the home will lead to removal of their children by child welfare authorities, lack of knowledge about resources, and lack of trust in “the system.” It is likely that women facing both violence and depression will find these barriers even more challenging to help-seeking, but no studies have specifically examined this issue.

**Knowledge Gaps**

- There is little data examining how best to help abused women suffering from depression in their help-seeking, and how best to provide resources and services to them. This remains a key priority in Ontario.

**Implications for Policy-Makers and Health-Care Providers**

- Health-care providers should be aware of the high co-occurrence of depression and intimate partner violence and ask questions about violence exposure if women present with depression.
(and assess for depression if women disclose violence). Identification of the depression should lead to appropriate, evidence-based treatments (Section 3), which may assist women in also resolving the violence in their lives, though there is little evidence regarding whether and how this happens and this remains a research priority.

- Services for women, including primary health care, should focus on reducing the barriers to violence disclosure and help-seeking, including ensuring confidentiality, discussing with women the implications of mandatory reporting requirements for child abuse and gunshot wounds, and providing referral to available IPV-specific services in the community, as appropriate.

- Understanding the co-occurrence of these issues in women’s lives, their (combined) impact, and ways to address each and/or both, remain urgent research priorities.
<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Type</th>
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<tr>
<td>Golding, JM 1999, US</td>
<td>Meta-Analysis</td>
<td>NR</td>
<td>Cross-Sectional-18</td>
<td>Prevalence of depression among abused women</td>
<td>47.6% NR</td>
<td>Risk of depression in abused versus non-abused women was 3.80 (3.16 - 4.57), mean weighted OR (95% CI). Studies report that severity or prevalence of depression was significantly associated with severity or duration of violence, with more severe/prolonged abuse associated with more and/or more severe depression</td>
<td>Fair</td>
</tr>
</tbody>
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Abbreviations: NR – Not Reported; OR – odds ratio.
CHAPTER 11: SPECIAL GROUPS - HISTORY OF CHILD MALTREATMENT

CHIACHEN CHENG AND NADINE WATHEN

BACKGROUND

Population epidemiologic studies have consistently illustrated that adverse childhood experiences are associated with increased difficulties in adulthood, including a range of psychiatric outcomes, disability and poorer functioning (Anda, R. F. et al., 2002; Kendler, K. S. et al., 2000; Goering, Paula, Lin, Elizabeth, Campbell, D, Boyle, Michael H., & Offord, David R., 1996; Goering, P., Lin, E., Campbell, D., Boyle, M. H., & Offord, D. R., 1996; Jumper, S. H., 1995). In particular, mood disorders are associated with increased morbidity.

Child maltreatment is defined by the WHO as any act or treatment “resulting in actual or potential harm to the child’s health, survival, development or dignity in the context of a relationship of responsibility, trust, or power” (2005). There are four main categories of child maltreatment: physical abuse, sexual abuse, emotional abuse, and neglect (Trocmé, N. et al., 2005). The WHO categorizes a fifth form of maltreatment as child exploitation. Canada differs from the WHO by highlighting exposure to family violence as a fifth category of child maltreatment (Trocmé, N. et al., 2005).

In Canada, a few population-based studies have been conducted to examine the relationship between child maltreatment and later difficulties with depression. This section will outline the results of a systematic review investigating the relationship between childhood maltreatment and depression among Canadian women.

RESULTS

The search was focused on retrieving Canadian, and specifically Ontario studies. The search yielded seven reviews, no systematic reviews, five meta-analyses, 20 primary studies and six other types of papers such as commentaries or qualitative studies. Ten studies met inclusion criteria. Articles excluded did not stratify analyses by sex, did not have appropriate outcomes or did not focus on women reporting depression. Quality criteria, which were determined a priori, were applied to the 10 articles, and six were rated “fair” (Table 11.1). Although four retrieved articles initially met eligibility criteria, they were excluded from data abstraction as the quality was assessed as “poor”. Quality assessments were not performed on original studies of non-Canadian populations.

EPIDEMIOLOGY OF DEPRESSION AMONG WOMEN WITH HISTORY OF CHILD MALTREATMENT

PREVALENCE OF CHILD MALTREATMENT AMONG WOMEN IN ONTARIO

The prevalence of maltreatment in Canada has been studied by two compelling population surveys: The Canadian Incidence Study (CIS) (Trocmé, N. et al., 2005) and Mental Health...
Supplement to the Ontario Health Survey (MacMillan, H. L. et al., 1997) both provide valuable data about the extent of the problem in Canada and Ontario, especially as measured in the general population, rather than clinical or tertiary care samples.

The 2003 CIS was a cross-sectional population survey that only reported on cases that came in contact with child welfare services. The CIS reported that there were 21.7 cases of substantiated maltreatment per 1,000 children across all five categories of maltreatment. The incidence of substantiated cases per 1,000 females (21.6) was almost identical to the incidence among males (21.8). In cases where there was only one form of maltreatment documented, neglect and exposure to family violence were the most frequent, each accounted for 25 per cent of the substantiated cases. However, it is important to note that 19 per cent of the substantiated cases involved multiple forms of maltreatment. Moreover, there were gender differences across different types of maltreatment. For example, of the substantiated sexual abuse and emotional abuse cases, 63 per cent and 54 per cent involved girls, respectively. Furthermore, the 2003 CIS reported that 17 per cent of children who experienced substantiated maltreatment also were identified with depression or anxiety symptoms.

The OHS-MHS was one of the first community surveys to document the prevalence of physical and sexual abuse in the general population (MacMillan, H. L. et al., 1997). History of child maltreatment was surveyed retrospectively using a validated self-report measure. Some gender differences were noted, with more men (31.2%) reporting physical abuse history than women (21.1%). However, more women (12.8%) than men (4.3%) reported a history of sexual abuse. Although a similar percentage of men (10.7%) and women (9.2%) reported severe physical abuse history, more women (11.1%) than men (3.9%) reported a history of severe sexual abuse. Overall 27 per cent of women reported one or more incidents of childhood experience of physical and/or sexual abuse.

The CIS and OHS-MHS provide important epidemiological information about child maltreatment. Given that only a small percentage of physical (5.1%) and sexual abuse (8.7%) (MacMillan, H. L., Jamieson, E., & Walsh, C. A., 2003) are ever reported to child protection services, and other forms of maltreatment have not been measured extensively, these estimates likely under-report the true population prevalence of child maltreatment. The OHS estimated that almost one in every three women in Ontario have experienced childhood physical and/or sexual abuse. The implication is: there are likely much more than 27 per cent of women in Ontario living with the associated morbidity and consequences of childhood maltreatment.

**Epidemiology within Ontario**

There were four original studies that examined mood disorder outcomes within the OHS-MHS. This study is a population-based, cross-sectional survey in which participants aged 15 to 64 years, were randomly selected and interviewed between November 1990 and March 1991. Diagnosis of psychiatric disorders were made by the Composite International Diagnostic Interview and childhood history of maltreatment by the Child Maltreatment History Self-Report (MacMillan, H. L. et al., 1997). The four studies examined different aspects of mood disorder and its association with childhood maltreatment.

MacMillan et al (2001) explored the prevalence of lifetime psychopathology, including major depressive disorder, associated with a history of childhood abuse. McHolm et al. (2003) reported the relationship between childhood physical abuse and suicidality among depressed
women. Levitan et al (1998) looked at particular neurovegetative symptom clusters or mood disorders and the association with childhood physical or sexual abuse. Levitan et al (2003) also investigated the strength of association between childhood abuse and co-morbid depression and anxiety disorders.

An important finding of MacMillan and colleagues’ work (2001) was that the association between childhood maltreatment and later psychopathology varied by gender. The association tended to be stronger in women than men. MacMillan and colleagues reported that 11.7 per cent of the women surveyed had major depressive disorder, and 34.6 per cent had any psychiatric disorder. Furthermore, 26.6 per cent of women respondents had a history of physical and/or sexual abuse; 21.2 per cent had experienced physical abuse and 12.4 per cent experienced sexual abuse. Among women who experienced physical abuse in childhood, 23.3 per cent had a lifetime diagnosis of major depressive episode, compared to 8.6 per cent (p<0.0001) among those who did not experience physical abuse. Similarly, 28.5 per cent of those women with a childhood history of sexual abuse had a lifetime prevalence for major depressive episode, compared to 9.3 per cent (p<0.0001) among those who did not experience sexual abuse. MacMillan et al also found that history of physical abuse was associated with similar morbidity as childhood sexual abuse. MacMillan and colleagues provided possible explanations for the variation between genders.

Similar to MacMillan et al (2001), McHolm and colleagues (2003) found that there was significant morbidity associated with physical abuse. Of female respondents with major depression, 40.3 per cent reported a history of physical abuse. Furthermore, 41.5 per cent indicated that they had a history of suicidal thoughts and at least one suicide attempt. Most significantly, childhood physical abuse may be closely associated with suicidal ideation among depressed women. Prevalence of childhood physical abuse in women with major depression who made a suicide attempt was 31.4 per cent. The prevalence of childhood physical abuse in women with major depression who considered a suicide attempt was 66.5 per cent. Women who were depressed and had a history of childhood physical abuse were three times more likely to have reported suicidal ideation. Early history of “physical abuse was more predictive of risk for suicidal ideation than a woman’s psychiatric history (including psychiatric comorbidity), family psychiatric history, or demographic factors” (McHolm, A. E., Cheng C., & MacMillan, H. L., 2004).

Levitan et al (1998) examined four different neurovegetative groupings of typical depression (decreased appetite, weight loss, insomnia), atypical depression (increased appetite, weight gain, hypersomnia), neither typical nor atypical depression and both typical and atypical symptoms of depression. They found 5.6 per cent of the community population were women who met the criteria for lifetime or current diagnosis of depression. Women represented 69.7 per cent of the people diagnosed with depression. There was an increased risk of atypical depression if an individual had a history of childhood sexual or physical abuse. This association was not found in depression with typical features. Of note, there was also an association between mania and childhood experience of abuse.

In 2003, Levitan and colleagues re-examined the same database for strength of association between child maltreatment and co-morbid depression and anxiety disorders. They defined four groups: controls, depressed, anxious and co-morbid anxious and depressed. Among this randomly selected community sample, 3.8 per cent had depression and 2.0 per cent had co-morbid anxiety.
and depression. Of those diagnosed with depression, or co-morbid disorders 61 per cent and 75.6 per cent were women, respectively. They found a consistent association between childhood sexual abuse and co-morbid depression and anxiety, but not with any disorder alone (Levitan, R. D., Rector, N. A., Sheldon, T., & Goering, P., 2003). Levitan et al made the argument that in childhood maltreatment, it is important to consider the significance of experiencing co-morbid disorders rather than “pure” disorders. People who have experienced childhood maltreatment may not be at increased risk for “pure” disorders, but are at risk for co-morbid disorders. Unlike MacMillan and colleagues (2001), Levitan et al in this study and in the previous one (1998), did not find an interaction between gender and diagnosis, suggesting that childhood maltreatment is a risk factor for depression and anxiety in both genders.

**Epidemiology Outside Ontario, or Across Canada**

Outside of Ontario, the literature can be informed by the National Population Health Survey. Arboleda-Flórez and Wade (2001) examined the role of childhood victimization and adult female victimization on later major depressive episode. They found among a cross-sectional population based sample of 16291 adults with ages ranging from 19-102 years, that the prevalence of depression in women was 7.3 per cent. The prevalence of depression among women who were exposed to childhood abuse was 13.0 per cent.

In Quebec, Conway and colleagues (2004) studied the association between childhood and adult sexual abuse and the tendency to ruminate on sadness or experience dysphoria. The authors used structural equation modelling and factor analysis to analyse survey results of undergraduate college students who approached the survey booth. Among a cross-sectional, convenience sample of 18 to 68 year olds (mean 26.6 years), they found that depending on the type of sexual abuse the prevalence among women was between 3 and 43.6 per cent. Further, more women experienced childhood sexual abuse. The mean Beck Depression Inventory score for women in the entire sample was 8.55. Women had higher rumination scores than men; the difference was accounted for by women’s increased history of sexual victimization and intimidation.

**Barriers to Care for Depression in Women with History of Child Maltreatment**

It is estimated that only a small percentage of physical (5.1%) and sexual abuse (8.7%) (MacMillan, H. L., Jamieson, E., & Walsh, C. A., 2003) are ever reported to child protection services. A number of factors have been studied, including stigma associated with abuse, victims’ fears about the consequences of disclosure, societal perceptions that family issue are private, lack of awareness about what is maltreatment, potential lack of knowledge of professionals to recognize or report child maltreatment (Tonmyr, L. & Doering, L., 2004; Loos, Stanley K., Bala, Nicholas M. C., Clarke, Margaret E., & Hornick, Joseph P., 1999; Loos, S. K., Bala, N. M. C., Clarke, M. E., & Hornick, J. P., 1999). According to a review by Finkelhor and colleagues, (2001), other key reasons for under-reporting include jurisdictional fragmentation, and the time and financial costs associated with reporting child maltreatment. If there is under-reporting of child maltreatment, then the concern is that even fewer people are receiving necessary mental health care.
Finkelhor et al. (2001) reviewed factors associated with seeking mental health services among people who have experienced child maltreatment. Offord and colleagues (1987) found in their seminal work that five out of six children meeting criteria for a mental disorder had not received specialized services within the previous six months. According to Finkelhor et al. there is some evidence that children with internalizing disorders (such as depression) do not receive the care they need because internalizing disorders are generally not disruptive and can be overlooked or minimized. Further, although kids may have psychological problems, the adults may not recognize the issue as a mental health problem. Help is usually sought when the observed behaviour is more severe, aggressive and disruptive. They further found that parents who have had their own experience with mental health services are more likely to help their children seek help via these services.

While there is little direct evidence to show that reporting child maltreatment or seeking mental health services will decrease the incidence of depression among women, there is evidence that certain interventions are now available that can improve outcomes. For example, intensive nurse home visitation has been shown to prevent physical abuse and neglect and improve outcomes for children. Trauma focused cognitive-behavioural therapy has been effective in treating post-traumatic stress disorder, depression and anxiety related to sexual abuse. Furthermore, evidence-based treatments of many disorders, including those associated with childhood maltreatment exist and are available to varying degrees. Dismantling the barriers that prevent these evidence-based interventions from being widely available or accessible should be a priority.

Knowledge Gaps

- Since neglect and exposure to family violence are the most common types of substantiated abuse, there is a need to understand their link to depression.
- There are few studies about emotional abuse and neglect and their relationship to depression because these types of abuse are difficult to measure.

Implications for Policy-makers and Health-Care Providers

- It is important for policy-makers to implement programs, interventions or services that are reflective of the best evidence. Without adherence to the original models of effective programs, the desired results for improved outcomes may not be achieved for depressed women with a history of child maltreatment.
<table>
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<th>Age, yrs Range, Mean</th>
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<td>2004, Canada</td>
<td>Cross-sectional: Convenience Sample Montreal, Quebec</td>
<td>18–68, 27</td>
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<td>3.0–43.6% Lifetime prevalence of childhood sexual abuse based on type of abuse</td>
<td>Mean BDI scores in women Mean (SD): 8.6 (6.7)</td>
<td>Fair</td>
</tr>
<tr>
<td>Levitan, RD</td>
<td>2003, Canada</td>
<td>Cross-sectional: Population-based OHS-1990/1991</td>
<td>15–64, Controls: 36 Depressed: 39</td>
<td>848</td>
<td>UM-CIDI</td>
<td>3.8-Prevalence of major depression</td>
<td>Depression in individuals physically abused as a child OR (95% CI): 1.1 (1.1-1.2) Depression in individuals sexually abused as a child OR (95% CI): 1.6 (1.2-2.1)</td>
<td>Fair</td>
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<tr>
<td>McHolm, AE</td>
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<td>Cross-sectional: Population-based OHS-1990/1991</td>
<td>15–64, 39.2</td>
<td>347</td>
<td>UM-CIDI</td>
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<tr>
<td>MacMillan, HL</td>
<td>2001, Canada</td>
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<td>3678</td>
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<td>23.3-Prevalence of major depressive disorder in women who were physically abused in childhood 8.6-Prevalence of major depressive disorder in women who were not physically abused in childhood</td>
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<tr>
<td>Levitan, RD</td>
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<td>335</td>
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<td>40.2%-Prevalence of depressive episode in women who were physically abused as a child 38.29%-Prevalence of depressive episode in women who were sexually abused as a child</td>
<td></td>
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</table>

Abbreviations: BDI – Beck Depression Inventory OHS – Ontario Health Survey, Mental Health Supplement
CHAPTER 12: SPECIAL GROUPS - HOMELESS WOMEN

LORI E. ROSS

BACKGROUND

Homelessness has been recognized as a significant public health issue in Canada (Frankish, C. J., Hwang, S. W., & Quantz, D., 2005). Data from the 2001 Census indicated that over 14,000 Canadians were homeless, and this figure is considered by researchers and experts to be a substantial underestimate (Frankish, C. J., Hwang, S. W., & Quantz, D., 2005). Although men make up the majority of homeless persons, women and families have been reported to be the fastest growing segments of the homeless population (Lewis, J. H., Andersen, R. M., & Gelberg, L., 2003). For example, in the city of Toronto in 2002, 5,683 single women used shelters, the highest ever for the city. Further, the number of one-parent families using shelters increased by 51 per cent between 1990 and 2002, with approximately 2,300 one-parent families using shelters in 2002 (City of Toronto, 2003).

Quantitative and qualitative studies of homeless individuals suggest that the experience of homelessness for women differs markedly from the experience for men. For example, homeless women are more likely than homeless men to have been the victims of violence (Roll, C. N., Toro, P. A., & Ortola, G. L., 1999). While men report loss of job, mental health problems and drug and alcohol problems to be the primary precipitants of homelessness, women report eviction, interpersonal conflict, and loss of support as their major reasons for homelessness (Tessler, R., Rosenheck, R., & Gamache, G., 2001). Finally, there is some evidence that women may remain homeless for shorter periods of time than men due to their entitlement to shelter resulting from family responsibilities (i.e., minor children) (Zlotnick, C., Robertson, M. J., & Wright, M. A., 1999) or their increased likelihood of using alternative forms of accommodation (e.g., staying with friends or relatives) (Lenon, S., 2000).

The prevalence of mental illness and substance abuse is much higher in the homeless population than among the general population, with rates of 80 to 95 per cent reported in the United States, Australia, Canada, Norway and Germany (Martens, W. H., 2001). It has been proposed that sex differences in homelessness may interact with sex differences in rates of mental illness (Rich, A. R., & Clark, C., 2005). However, the small number of women typically included in studies of homeless individuals has made assessment of mental health outcomes among homeless women difficult. This section will review the available data with respect to prevalence of depression and access to mental health services among homeless women.

RESULTS

A search of the literature yielded 28 articles, none of which met eligibility criteria. The primary sources of data for this section are: 1) Ontario- and Canada-based academic and grey literature reporting on mental health and health service utilization among homeless samples (primarily in the city of Toronto) 2) international studies that investigated the lifetime or 12-month prevalence of depression among homeless women; and 3) specific studies that discuss barriers

Epidemiology of Depression among Homeless Women

Prevalence of Depression among Homeless Women

Due to methodological challenges in studying homeless populations, few data are available upon which to base estimates of the prevalence of mental health problems among homeless women. Toronto-based reports have indicated that as many as 75 per cent of homeless women are believed by hostel workers to have a mental illness — the most common is major depression (Springer, J. H., Mars, J. H., & Dennison, M., 1998).

Only one Ontario-based study has reported on a systematic assessment of the prevalence of affective disorders among homeless women (ToLomiczenko, G. S, & Goering, P. N, 2001). In this study of 300 homeless individuals (66 women) selected using sampling proportions from Toronto-area shelters, psychiatric status was assessed using the Diagnostic Interview Schedule for the DSM-IV. The point prevalence of affective disorders in the women in this sample was 60.6 per cent. This was significantly greater than the prevalence of affective disorders observed in men (46.6%). Although data for major depression specifically were not reported in this sample, the author reports that most of the cases of affective disorders among women were major depression (P. Georing, personal communication, November 2005).

The prevalence of depression reported among Ontario homeless women is somewhat higher than rates reported in studies from the United States. In a study of three homeless populations in St. Louis, Missouri, lifetime prevalence rates of psychiatric illnesses were assessed using the Diagnostic Interview Schedule for DSM-IV (North, C. S., Eyrich, K. M., Pollio, D. E., & Spitznagel, E. L., 2004). In 2000, approximately 33 per cent of the 98 homeless women sampled met criteria for lifetime major depression. This was significantly greater than the rate of major depression among women determined in the general population through the 1990 Epidemiologic Catchment Area study. In another cross-sectional study of a community-based probability sample of 974 homeless women in Los Angeles County, mental health was assessed using the Rost/Burnam Depression Screener. Forty-nine per cent (49%) of this sample screened positive for depressive disorder in the last 12 months (Lewis, J. H., Andersen, R. M., & Gelberg, L., 2003).

Methodological issues may explain some of the inconsistency in results between the Canadian and U.S. data. In particular, family status has been demonstrated to be an important moderator of the relationship between homelessness and mental health status among women. Specifically, female heads of homeless families have lower rates of mental health and substance use problems than do other homeless men and women (Shinn, M. et al., 1998). In a case control study of 220 homeless and 216 housed mothers receiving public assistance assessed using the Structured
Clinical Interview for DSM-III-R—Non-Patient Edition, the lifetime prevalence of major depression among homeless mothers was 45.0 per cent, and the one-month prevalence of depression was 9.6 per cent. These rates did not differ significantly from the rates of depression observed in the housed low-income mothers (Bassuk, E. L., Buckner, J. C., Perloff, J. N., & Bassuk, S. S., 1998). As such, samples including greater proportions of women with children would be expected to show lower rates of psychiatric disorders.

**Barriers to Care for Depression in Homeless Women**

No Canadian studies have systematically assessed satisfaction with, or barriers to, mental health care among homeless women. In a Toronto study of 458 homeless men and women, 50.9 per cent of the 106 women interviewed reported at least one incident in the past year where they felt unhappy or frustrated with the kind of health care they had received, or had felt treated badly by a health-care worker (Ambrosio, E., Baker, D., Crowe, C., & Hardill, K., 1992). Also in this study, during a 12-month period, more than half of respondents reported they would have liked to speak to someone about their mental or emotional problems, but were unable find anyone (Ambrosio, E., Baker, D., Crowe, C., & Hardill, K., 1992). These findings suggest that homeless people, and homeless women in particular, experience barriers to accessing appropriate mental health care despite the significant need for care in this population.

Numerous reports have identified barriers to accessing health care for homeless people, and many of these barriers are likely relevant to homeless women with depression. These barriers include:

- **Competing priorities.** In the context of immediate needs for food, shelter, and personal security, homeless people may not have time for or interest in addressing their health or mental health needs.

- **Compliance.** Homeless people may have difficulty accessing and appropriately storing needed prescription medications and may not be able to afford to purchase equipment or supplies recommended by their health care providers (e.g., dressings, disinfectants). Lifestyle modifications (e.g., diet, rest) are typically not feasible for homeless people. Few homeless people have an appropriate environment in which they can recuperate after hospital discharge, compromising their recovery.

- **Discrimination and stigmatization by health care providers.** Homeless individuals may have had previous experiences of health care being denied or provided reluctantly;

- **Lack of necessary identifying documents.** In particular, many homeless people do not have a health card (often due to theft or loss) and therefore may be denied services. In one Toronto-based survey of 458 homeless men and women, 37 per cent of the sample did not have a health card (Ambrosio, E., Baker, D., Crowe, C., & Hardill, K., 1992). It is often difficult to get replacement documentation, particularly if other identifying information is also lost or stolen.

- **Disincentives for physicians.** Without proof of insurance status, physicians and other health care providers are often not compensated for care that is provided to homeless individuals. This is particularly problematic in that the complex health-care needs of homeless individuals often necessitate longer than average appointment times.

- **Lack of comfortable and safe environment for care.** Women with histories of trauma in particular may find the institutional environment of hospitals and other health-care settings...
to be uncomfortable and potentially unsafe, particularly if the environment also offers care to male patients.

- **Lack of continuity of care.** Because many homeless people do not have a fixed address or telephone number, they are unable to be reached by health-care providers to provide test results or schedule follow-up appointments.

- (as reviewed by (Frankish, C. J., Hwang, S. W., & Quantz, D., 2005; Eberle, M., Kraus, D., Pomeroy, S., & Hulchanski, D., 2001)).

In studies of barriers to health care for homeless women, the above barriers have been reported in addition to the following: lack of transportation, lack of a support system, cost of care, lack of health insurance, discomfort or distrust of the hospital/institutional environment, lack of child care, lack of awareness of services, lack of appropriate services for women with dual diagnoses (i.e., concurrent mental health and substance use issues), insensitive providers, not knowing where to go for care, long office waiting times, being too sick to seek care, and communication problems (Lewis, J. H., Andersen, R. M., & Gelberg, L., 2003; Inner City Health Unit, 2003; Ontario Women’s Health Council, 2002). Finally, depression may itself present a barrier to health care for homeless women. In the above-mentioned study of 974 homeless women in Los Angeles County, meeting criteria for depressive disorder in the past 12 months was associated with a significantly increased perceived unmet need for medical care (OR=1.59, 95% CI 1.22, 2.07) (Lewis, J. H., Andersen, R. M., & Gelberg, L., 2003). This is consistent with another study of sheltered homeless mothers, in which women reported “being depressed/not up to going” as one of the primary reasons for not receiving medical care (Weinreb, L., Goldberg, R., & Perloff, J., 1998).

Lewis et al. (2003) also assessed facilitators to accessing health care. Factors felt by the majority of the women to be helpful in obtaining care included: receiving treatment for all health-care problems at the same place, living in a house or apartment, weekend or evening clinic hours, receiving health care and social services at the same place, and free transportation to health care. The majority of women with children also reported that receiving health care at the same time as their children would be very helpful (Lewis, J. H., Andersen, R. M., & Gelberg, L., 2003). The desire for accessible, comprehensive, and integrated services was also expressed in a recent qualitative study conducted in four settings across Ontario (Inner City Health Unit, 2003).

Likely as a result of the numerous barriers to health care, homeless individuals have been demonstrated to access their health care through emergency departments rather than through primary care facilities (Kushel, M. B., Perry, S., Bangsberg, D., Clark, R., & Moss, A. R., 2002). This is also true of mental health services: homeless individuals with major mental illnesses are more likely to access in-patient and emergency services than outpatient services (Folsom, D. P. et al., 2005). As a result, health records are often scattered between numerous health-care providers (Ambrosio, E., Baker, D., Crowe, C., & Hardill, K., 1992).

**Knowledge Gaps**

- Ontario-based, multi-site research is needed to more precisely estimate the prevalence of depression among both single homeless women and homeless women with children.

- Research is needed to establish methods of service provision that will overcome the substantial barriers faced by homeless women in accessing mental health care.
Implications for Policy-Makers and Health-Care Providers

- Policy initiatives aimed broadly to reduce risk of homelessness (e.g., increases in affordable housing and social assistance) would be expected to contribute to reduced rates of depression among women at risk of homelessness and would enable women at risk for homelessness to make their mental health care a priority.
- Education and outreach to homeless women about available mental health services in their communities and the benefits of mental health care.
- Education for health-care providers about the appropriate provision of mental health care to homeless individuals and financial incentives for health-care providers who treat homeless individuals without proof of insurance status.
- Integrated service centres at which homeless women can receive physical and mental health care, and well as access social services, for themselves and their children.
- Mental health services with expanded evening and weekend hours and reasonable wait times.
- Services to facilitate acquiring and storing necessary identification (e.g., health cards), as well as services which will provide care to individuals without such identification.
- Provision of telephone or email services free of charge to enable depressed homeless women to maintain contact with their health-care providers and members of their support networks.
- Services providing transportation to and from the site and on-site child care, or reimbursement for these costs.
- Respite services to provide homeless women with an appropriate environment for recovery after hospital discharge, and to allow women with depression the appropriate rest and diet required to achieve full recovery.

Conclusions

Research with homeless persons presents methodological challenges due to the difficulties inherent in studying a transient and marginalized population. Study of homeless women is further complicated by the relatively small number of women among shelter users, and women’s use of informal housing sources (e.g., staying with friends or family). However, available data indicate that between 30 per cent to 60 per cent of single adult homeless women suffer from depression, and these women face numerous barriers to accessing mental health care.
CHAPTER 13: SPECIAL GROUPS – LONE MOTHERS

SHIRLEY WANG AND ENZA GUCCIARDI

BACKGROUND

Although two-parent families continue to constitute the major family structure in Canada, the prevalence of lone-parent families has been increasing over the decades (Cairney, J., Boyle, M. H., Lipman, E. L., & Racine, Y., 2004). Among these lone-parent families, the number of those headed by women (81.3%) is much greater than lone-father families (18.8%) (Statistics Canada, 2001). In Ontario, the rate of lone-mother families has been growing over the years from 9.8 per cent of all families in 1986, to 10.4 per cent in 1991, to 12.1 per cent in 1996, to 12.6 per cent in 2001 (Statistics Canada, 2001; Statistics Canada, 1996; Statistics Canada, 1991; Statistics Canada, 1986). As a lone-parent, mothers attempt to fulfill multiple roles, that of the nurturer and that of the provider, which may result in role overload, as well as other difficulties experienced by lone mothers, such as work-home conflicts, the need for child care arrangements, low-wages, increased stress and a variety of health and mental health problems. In particular, depression has emerged as an illness that has increasingly become the focus of recent studies on lone-motherhood. The majority of the studies are consistent in their conclusion that lone mothers are at a higher risk of experiencing depression than married mothers (Cairney, J., Boyle, M. H., Lipman, E. L., & Racine, Y., 2004; Wang, J. L., 2004; Cairney, J., Boyle, M., Offord, D. R., & Racine, Y., 2003; Lipman, E. L., Boyle, M. H., Dooley, M. D., & Offord, D. R., 2002; Cairney, J. & Wade, T. J., 2002b; Wade, T. J. & Cairney, J., 2000; Cairney, J., Thorpe, C., Rietschlin, J., & Avison, W. R., 1999). In view of the fact that risk factors associated with depression, such as gender or disadvantaged socio-economic status, are also associated with lone parenthood (Cairney, J., Thorpe, C., Rietschlin, J., & Avison, W. R., 1999), it is understandable that depression has a higher prevalence among lone mothers compared to partnered-mothers.

Among the present literature, there is a lack of a standard definition for “single” or “lone” parent, which can be problematic. The term “single parent” is synonymous with the term “lone parent,” which includes persons who were never married, or who are separated, divorced, not currently living with a legal or common-law spouse, or widowed with children. It is important to distinguish and exclude unmarried but cohabiting couples with children from the population of lone mothers. It is also important to note that the definition of “single” or “lone” mother may vary according to the age of the dependent child. Statistics Canada’s definition is broader and includes lone-parent families regardless of the children’s age. Therefore, this definition includes groups of lone-mother families that are very different from those with children under the age of 18, which are the focus of most of the studies.

RESULTS

A search of the literature yielded 21 primary studies which met eligibility criteria. Nineteen primary studies were considered “good” and two were “fair”. One study was excluded as it was not relevant to lone mothers (Table 13.1).
In the majority of the reviewed studies, “major depression” is measured by using the University of Michigan Composite International Diagnostic Interview-Short form (UM-CIDI-SF), which diagnoses major depression based on the criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM) (Cairney, J., Boyle, M. H., Lipman, E. L., & Racine, Y., 2004; Wang, J. L., 2004; Cairney, J., Boyle, M., Offord, D. R., & Racine, Y., 2003; Lipman, E. L., Boyle, M. H., Dooley, M. D., & Offord, D. R., 2002; Markle-Reid, M., Browne, G., Roberts, J., Gafni, A., & Byrne, C., 2002; Cairney, J. & Wade, T. J., 2002b; Browne, G., Byrne, C., Roberts, J., Gafni, A., & Whittaker, S., 2001; Wade, T. J. & Cairney, J., 2000; Cairney, J., Thorpe, C., Rietschlin, J., & Avison, W. R., 1999; Byrne, C. et al., 1998; Lipman, E. L., Offord, D. R., & Boyle, M. H., 1997; Browne, G. et al., 1997; Davies, L., Avison, W., & McAlpine, D., 1997; Hall, L. A., Gurley, D. N., Sachs, B., & Kryscio, R. J., 1991). Respondents who reported having had a high number of symptoms were classified as having had an episode of major depression. One study used the Center for Epidemiologic Studies-Depression Scale (CES-D) to define maternal depression. A cut-off score of 16 and higher was used to distinguish highly symptomatic participants (Cairney, J., Boyle, M. H., Lipman, E. L., & Racine, Y., 2004; Wang, J. L., 2004; Cairney, J., Boyle, M., Offord, D. R., & Racine, Y., 2003; Lipman, E. L., Boyle, M. H., Dooley, M. D., & Offord, D. R., 2002; Markle-Reid, M., Browne, G., Roberts, J., Gafni, A., & Byrne, C., 2002; Cairney, J. & Wade, T. J., 2002b; Browne, G., Byrne, C., Roberts, J., Gafni, A., & Whittaker, S., 2001; Wade, T. J. & Cairney, J., 2000; Cairney, J., Thorpe, C., Rietschlin, J., & Avison, W. R., 1999; Byrne, C. et al., 1998; Hall, L. A., Gurley, D. N., Sachs, B., & Kryscio, R. J., 1991). Another study, which was conducted in Europe, used the International Classification of Diseases (ICD-10) to define depressive episode, which is a serious psychiatric condition that includes a decline in mood, a reduction of energy and a decrease in activity (Cairney, J., Boyle, M. H., Lipman, E. L., & Racine, Y., 2004; Targosz, S. et al., 2003).

**Epidemiology of Depression among Lone Mothers**

**Prevalence of Depression among Lone Mothers in Ontario**

Previous research has shown that lone mothers are at greater risk of mental health problems compared to partnered mothers (Cairney, J., Boyle, M. H., Lipman, E. L., & Racine, Y., 2004; Wang, J. L., 2004; Cairney, J., Boyle, M., Offord, D. R., & Racine, Y., 2003; Lipman, E. L., Boyle, M. H., Dooley, M. D., & Offord, D. R., 2002; Cairney, J. & Wade, T. J., 2002b; Cochran, S. D., 2001; Mays, V. M. & Cochran, S. D., 2001; Wade, T. J. & Cairney, J., 2000; Cairney, J., Thorpe, C., Rietschlin, J., & Avison, W. R., 1999; Byrne, C. et al., 1998; Lipman, E. L., Offord, D. R., & Boyle, M. H., 1997; 1997; Davies, L., Avison, W., & McAlpine, D., 1997; Meyer, I. H., 1995). Three studies in particular focused on the prevalence of depression among lone mothers residing in Ontario. Lipman et al. (1997) used the 1991 Ontario Health Survey (OHS) and found that the prevalence of major depression among lone mothers (10%) was double that among married mothers (5%). Cairney et al. (1999) performed a similar study, focusing on the 12-month prevalence of depression among lone and married mothers in Canada using the 1994 National Population Health Survey (NPHS) Survey by Statistics Canada. The findings of this study revealed that lone mothers in Ontario were 1.3 times more likely to develop and suffer from major depression than married mothers. Another study was completed in 1997 by Davies et al. who conducted two-hour long interviews to examine the
relationships between early family hardships, depression history, and family status among lone (n=518) and married (n=502) mothers in London, Ontario. The authors found that 19.1 per cent of lone mothers were depressed in the past year compared to only 4.8 per cent of married mothers, 43.6 per cent of lone mothers stated they suffered from depression in their lifetime compared to only 15.3 per cent of married mothers, and as many as 78.2 per cent of lone mothers who have experienced depression in their lifetime also experienced recurrent depression compared to 66.2 per cent of married mothers with depression (Davies, L., Avison, W., & McAlpine, D., 1997). All three studies are consistent in their findings that in Ontario, the prevalence of depression among lone mothers is significantly greater than that among married mothers.

**Prevalence of Depression among Lone Mothers on Social Assistance in Ontario**

Within the literature, there is a prevailing view that dependence on social assistance can result in feelings of vulnerability, low self-esteem, loss of productivity, and possibly depression (Markle-Reid, M., Browne, G., Roberts, J., Gafni, A., & Byrne, C., 2002; Browne, G., Byrne, C., Roberts, J., Gafni, A., & Whittaker, S., 2001; Byrne, C. et al., 1998). Data collected by Byrne et al. (Byrne, C. et al., 1998) who used the 1994/95 Ontario Mental Health Survey (OMHS), revealed that the 12-month prevalence rate of depressed lone parents receiving social assistance was almost half (45.4%) of the sample population (n=760). In view of the fact that 735 (96.7%) of the participants were lone mothers and only 25 (3.3%) were lone fathers, a plausible assumption is that lone mothers make up the majority of this high depression rate. The authors also found that although lone mothers in Canada (10.7%) and in Ontario (18.7%) headed a relatively small percentage of families in 1994-95, this group accounted for close to 40% of the local social assistance caseload in their study. Browne et al. (1997) conducted a similar study that yielded more recent results by conducting interviews with the participants. Although this study focused on a smaller sample of southwestern Ontario residents (n=101), the authors found a prevalence of depression among lone mothers on social assistance that was almost identical to that of the previous study (44.5%), which is almost half of their sample size (Browne, G. et al., 1997).

**Prevalence of Mental Health Services Utilization by Depressed Lone Mothers in Ontario**

If lone mothers in Ontario are more likely to experience depression than married mothers, it becomes salient to investigate whether lone mothers are more likely to use mental health services for mental health reasons. Cairney et al (2004) used data from the 1994/95 OMHS and found that in the previous 12 months, 21.2 per cent of lone mothers sought help for mental health concerns compared to only 7.6% of married mothers. Using the 1994/95 NPHS Cairney et al. (2002) reported that in the previous 12 months, the per centage of lone mothers who were diagnosed with major depression and who used mental health services was 72.4 per cent compared to 51.9 per cent of married mothers who were also diagnosed with major depression and who used mental health services in Ontario. Furthermore, the per centage of lone mothers who were not classified as having major depression but sought mental health services in the same time period was 15.3 per cent compared to 7.4 per cent of married mothers not diagnosed with major depression. Overall, lone mothers in Ontario are more likely (odds ratio (OR) of 2.41) to have seen a health care professional regarding their mental health status than partnered mothers (Cairney, J. & Wade, T. J., 2002b).
Prevalence of Depression Among Lone Mothers in Canada

Compared to Ontario, the prevalence of depression among lone mothers in Canada is almost identical. According to the 1994/95 NPHS, which used a representative sample from all 10 provinces of Canada, major depression was experienced by 15.4 per cent of lone mothers, which is more than double the rate of married mothers in Canada (6.8%) (Cairney, J., Thorpe, C., Rietschlin, J., & Avison, W. R., 1999). More recent data was extrapolated from the 1996/97 NPHS by Wang et al. (2004), which revealed that the per centage of lone mothers and married mothers in Canada experiencing major depression dropped after two years (11.7% and 5%, respectively). Although there is a decline in the prevalence of depression among mothers between 1994-95 and 1996-97, both studies found that in Canada, the risk of lone mothers suffering from major depression is consistently at least double that of partnered mothers. Not only is this trend observed across the nation, but also within each province where lone mothers have consistently higher rates of depression compared to married mothers (Cairney, J., Thorpe, C., Rietschlin, J., & Avison, W. R., 1999). Cairney et al. (1999) found that the prevalence of depression appears to be slightly greater among lone mothers living on the east coast and Quebec compared to the rest of the country, but these differences were not statistically significant.

As a result of their elevated risk for depression, it might be expected that lone mothers living in Canada would receive more professional help for their mental health care needs. Just as they found in the population of lone mothers residing in Ontario, Cairney et al. (2004) observed that the per centage of lone mothers living in Canada who were depressed and were using mental health services (23.7%) was more than double that of married depressed mothers who sought help from mental health professionals (10.1%) using the 1994/95 NPHS. These findings of higher service utilization by lone mothers compared to partnered mothers are confirmed by Wang et al. (2004) who used more recent data from the 1996/97 NPHS. The authors performed a study similar to that of Cairney et al. (2004) but compared how often mothers visited the different types of health professionals for mental health problems. The study’s results indicated that 18.3 per cent of lone mothers made visits to a health professional compared to eight per cent of married mothers for mental health problems (family doctor or general practitioner: 7.5% vs. 4%; psychiatrist: 2.3% vs. 1.4%; psychologist: 5.9% vs. 1.9%; social worker: 3.4% vs. 1.2%, respectively).

Prevalence of Depression among Lone Mothers Outside of Canada

In comparison to the prevalence of depression among lone mothers residing in Ontario, which was 10 per cent in 1991 (Lipman, E. L., Offord, D. R., & Boyle, M. H., 1997), the prevalence of depression among lone mothers outside of Canada, but in the same time period, is slightly lower in the United Kingdom and much higher in the United States. Targosz et al. (2003) conducted a study using data from fieldwork performed in 1993 using the British National Survey of Psychiatric Morbidity to determine the rate of depressive episodes (defined by the ICD-10) among lone mothers in the United Kingdom. According to the national survey, the prevalence of depressive episode among lone mothers was seven per cent, which was three times the rate for partnered mothers (2.5%) and 3.5 times the rate for the general population.
of mothers (1.9%). Although the rate of depression among lone mothers in the United Kingdom is somewhat lower than that of lone mothers living in Ontario within this time frame, the difference between the depression rates of lone and married mothers in the United Kingdom (4.5%) is almost identical to that of mothers in Ontario (5%) (Cairney, J., Thorpe, C., Rietzschl, J., & Avison, W. R., 1999). The discrepancy between prevalence may be due to the differences in methods used to assess depression in the two studies. Hall et al. (1991) conducted in-home interviews with low-income, lone mothers in Kentucky, United States (n=225) to investigate the effects of maternal depressive symptoms (defined by CES-D) and parenting attitudes on children’s behaviour. The prevalence of depression among these lone mothers was as high as 59.6 per cent in 1991, almost six times the rate of depression among lone mothers residing in Ontario of the same year. However, it is important to note that this prevalence rate is from a non-national survey and is among a subpopulation of lone mothers (low-income lone mothers) who are potentially at higher risk of depression already. Therefore, caution is warranted when comparing Ontario rates with these international rates.

**Transition into Lone-Motherhood and Depression in Canada**

In response to the elevated rates of depression and mental health service utilization among lone mothers in Canada, recent studies have focused on determining the factors associated with this prevalence. Most of the present research examines the cross-sectional association between the mother’s mental health and her present marital status, but few studies investigate the relationship between the mother’s depression and her movement into or out of marriage. Wade et al. (2000) conducted a Canadian-wide study to answer the question of whether a mother’s major depressive disorder is the cause or the consequence of her marital transition. By using the two-waves of 1994/95 and 1996/97 NPHS, the investigators performed a longitudinal study that followed mothers as they either moved into or out of marriage, remained married, or remained single during a two-year period.

The study’s findings revealed that at Time 1, the prevalence of depression among mothers who moved into lone-motherhood (15.21%) was more than double that of mothers who remained married (6.25%). By Time 2, the difference in depression rates between mothers who transitioned out of marriage (19.44%) and those who remained in their marriage (5.48%) remained more than double. These findings reveal that the mothers who have moved out of marriage experienced higher rates of MDD, but these results do not demonstrate whether depression is the cause or a consequence of transition out of marriage. Further research is required to determine the causation-selection relationship between marital transition and depression.

In a parallel analysis, the authors compared the mothers who entered into marriage with those who remained single throughout the study. The authors found that at Time 1, the prevalence of MDD among the women who moved out of lone-motherhood and married (15.79%) was higher than that of those who remained single (13.41%), but was not significant. Similarly, at Time 2, the rate of MDD of mothers who entered into a married status (14.20%) was higher than that of those who remained single (12.38%), but the difference was not significant. Therefore, rather than being alleviated of their depression by marriage, mothers who entered a partnered status had a higher rate of MDD than those remaining single. This finding reveals that marriage does not necessarily have a protective or curative effect against major depression.
Had the authors confined their investigation to a cross-sectional analysis at both waves, they would have concluded that the rates of depression among lone and married mothers are relatively stable with lone mothers about twice as likely to report major depression, which is consistent with previous studies. However, the authors conducted a longitudinal study that revealed more information about the relationship between major depression and marital transition. The study’s results found that women who leave lone-motherhood and enter marriage are more, rather than less, likely to experience depression. Although the authors claim that depression appears to precede this movement into lone status, they also caution that the question of whether depression is a precursor to, or a result of, the transition remains unanswered. In other words, it is impossible to assess whether these mothers moved out of their marriage because they experienced depressive episodes while married or whether they developed depressive symptoms as result of their poor marriage. This conclusion suggests that lone motherhood may not necessarily be a negative experience. For many, the move to lone status is an escape from a problematic or abusive relationship, and may actually improve the health of women and their children in the long-term (Wade, T. J., & Cairney, J., 2000).

**Risk Factors for Depression among Lone Mothers**

The possible factors that lead to higher prevalence of depression in lone mothers are not all identified or well understood and therefore, have become the focus of many recent studies. Cairney et al. (2003) conducted a study using the 1994/95 NPHS in which they examined how much of the relationship between family structure (lone- vs. two-parent mothers) and depression can be accounted for by exposure to stressful life events, chronic strains, early childhood adversities and by differences in social support. Study results revealed that compared to married mothers, lone mothers are 1.36 more likely to report negative life events, 1.14 more likely to experience on-going chronic stress, 1.29 more likely to have been exposed to adverse events during childhood or adolescence. With regard to their social support, lone mothers were less likely than partnered mothers to have someone whom they could confide in or count on (OR=0.65), less likely to be a member of any organizations or associations (OR=0.97), and less likely to have contact with neighbours, family, or friends (OR=0.87). The investigators found that factors of stress, such as recent negative life events, chronic strains, and childhood adversities, tend to increase the mothers’ risk of developing depression, whereas social support tends to buffer against depression.

**Outcomes of Depression among Lone Mothers**

**Health Status of Children of Depressed Lone Mothers**

The current studies are consistent in their findings that children of lone-parent families are at greater risk for a wide range of academic, social, emotional and behavioural problems (Cairney, J., Boyle, M. H., Lipman, E. L., & Racine, Y., 2004; Lipman, E. L., Boyle, M. H., Dooley, M. D., & Offord, D. R., 2002; Cairney, J. & Wade, T. J., 2002b; Browne, G., Byrne, C., Roberts, J., Gafni, A., & Whittaker, S., 2001; Cairney, J., Thorpe, C., Rietschlin, J., & Avison, W. R., 1999; Byrne, C. et al., 1998; Browne, G. et al., 1997). However, only a few studies focus on how the development of children of lone mothers is affected by maternal depression. Lipman et al (2002) conducted a study that investigated the strength of association
between lone-mother family status and child morbidity using the 1994/95 Canadian National Longitudinal Survey of Children and Youth Cycle 1. The authors found that maternal depression is strongly associated with social impairment and psychiatric problems of the child. The explanation for this correlation can either be biological (e.g., increased risk of depression in families in which a parent is depressed) and/or environmental (e.g., mothers who are depressed are unavailable to interact appropriately with their child, which may lead to poor self-esteem and social difficulties for the child) (Lipman, E. L., Boyle, M. H., Dooley, M. D., & Offord, D. R., 2002). Although there is a strong link between the higher proportion of children with behavioural problems and depressed lone mothers, the direction of this association remains questionable (Byrne, C. et al., 1998) due to the cross-sectional nature of the study. It is conceivable that maternal depression can lead to the child’s developmental problems, but it is also understandable that behavioural issues of the child can contribute to the mother’s depression. Further research is needed to better understand this interaction. Therefore, it is crucial not to stigmatize lone mothers and their family structure, by assuming that they are all incapable of successfully raising their children. As the literature notes, the problems faced by lone-parent families are no different from those of other families, they are simply greater in number and intensity (Cairney, J., Thorpe, C., Rietschlin, J., & Avison, W. R., 1999).

### Barriers to Care for Depression in Lone Mothers

As was discussed earlier, lone mothers suffer much higher rates of depression than married mothers do (Cairney, J., Boyle, M. H., Lipman, E. L., & Racine, Y., 2004; Wang, J. L., 2004; Cairney, J., Boyle, M., Offord, D. R., & Racine, Y., 2003; Targosz, S. et al., 2003; Lipman, E. L., Boyle, M. H., Dooley, M. D., & Offord, D. R., 2002; Cairney, J. & Wade, T. J., 2002b; Lutenbacher, M., 2000; Wade, T. J. & Cairney, J., 2000; Cairney, J., Thorpe, C., Rietschlin, J., & Avison, W. R., 1999), but they are also more likely to seek the help that they need (Cairney, J. & Wade, T. J., 2002b). Byrne et al. (1998) found that close to 90% of people with major depressive disorder can be treated successfully with antidepressants, or psychotherapy or a combination of both. Wade et al. (2000) also found that social support has a significant effect on helping to alleviate mothers of their depression, which is independent of marital transition. In fact, social support is equally advantageous for mothers suffering from MDD who either remain single or move into a marital relationship. According to the studies performed in Canada, there are few barriers, if any that prevent lone mothers from accessing mental health services in this country. Although the data suggests that access to mental health care services is not a barrier for lone mothers in Canada, this does not mean that the underlying social circumstances causing their risk of becoming depressed are being adequately addressed (Cairney, J., & Wade, T. J., 2002b).

### Intervention

The literature reveals that in general, comprehensive care programs improve the mental health and financial status of lone parents on social assistance as well as their child’s development. A study conducted by Browne et al. (2001) investigated the effects of adding a mixture of provider-initiated interventions to health and social services typically used by lone parents and their children who are on social assistance and are residing in Ontario. The lone parent families, of whom 98 per cent were headed by lone mothers, were divided into five groups and given
a care package that included a health promotion intervention, an employment retraining intervention, a child skills development intervention, a combination of all the interventions, or no additional services at all. The authors assessed the parent’s depression, the child’s behaviour disorders, and the family’s dependence on social assistance after a two-year period of their participation in the programs. The authors found that although there were non-statistically significant differences between the groups, there was an overall reduction in the prevalence of depression among the parents (from 42-52% to 17.6-21%) and an overall reduction of child behaviour disorders (8.7-25%). In addition, the families who received a combination of all the interventions had a significantly higher rate of voluntary exit from social assistance (25%) compared to the families who received only social assistance and no additional interventions (10%). In view of the fact that the study’s population was almost entirely composed of families headed by lone mothers, it is evident that the provision of a comprehensive care package is effective in improving a variety of aspects of the lives of lone mothers and her children specifically (Browne 2001).

**Knowledge Gaps**

- Although there have been many studies investigating the higher prevalence of depression among lone mothers and their more frequent use of mental health care services, they do not assess the quality, appropriateness or outcomes of these services (Cairney, J., & Wade, T. J., 2002b).

- More longitudinal studies are needed to follow single-support families and examine the cause-effect relationship between higher prevalence of depression among lone mothers and their children’s developmental difficulties during and following marital transition.

- The literature provides little information on more distant determinants of depression that may have occurred in the women’s life histories, such as childhood difficulties or other past events. Women bring these prior experiences into adulthood and into their parenting roles, which can either exacerbate or diminish their risk of becoming depressed. Therefore, future studies should look at lone mothers’ negative childhood or adolescent experiences as possible risk factors to determine the origins of their depression (Davies, L., Avison, W., & McAlpine, D., 1997).

**Implications for Policy-makers and Health-Care Providers**

- Combine a variety of interventions, such as health promotion, employment retraining, and child skills development, with income support for lone mothers receiving social assistance to provide a multi-faceted program that targets the various dimensions of the mother’s life, including her depressive symptoms (Byrne, C. et al., 1998).

- Develop intervention programs that improve child development and are directed at both two-parent and lone-mother families because the risk factors associated with increased rates of child morbidity, such as maternal depression, low-income, or low education occur in all types of family structure.
### Table 13.1: Characteristics of Included Primary Articles – Lone Mothers

<table>
<thead>
<tr>
<th>Author</th>
<th>Year, Country</th>
<th>Study Sample Recruitment, Instruments</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Other Results</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targosz, S</td>
<td>2003, UK</td>
<td>Cross-sectional: Population-based UK</td>
<td>16–64, NR</td>
<td>2,176</td>
<td>CIS-R</td>
<td>7.0-Prevalence of depressive episode in single mothers 2.5-Prevalence of depressive episode in supported mothers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipman, EL</td>
<td>2002, Canada</td>
<td>Cross-sectional: Population-based NLSCY</td>
<td>NR</td>
<td>9,398</td>
<td>shortened CES-D</td>
<td>NR</td>
<td>Single mothers mean depression score Mean (95% CI): 7.94 (7.53-8.34) Married mothers mean depression score Mean (95% CI): 4.17 (4.06-4.28)</td>
<td>Good</td>
</tr>
</tbody>
</table>

*continued on next page*
Table 13.1: Characteristics of Included Primary Articles – Lone Mothers

<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Sample Recruitment, Instruments</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Other Results</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browne, G 2001, Canada</td>
<td>Randomized Controlled Trial: Sole-support parents applying for social assistance Hamilton, Ontario</td>
<td>NR, Mean of Groups: 32–36</td>
<td>738</td>
<td>UM-CIDI-SF</td>
<td>43.3-Prevalence of major depressive disorder 13.0-Prevalence of dysthymia</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>Lutenbacher, M 2000, US</td>
<td>Cross-sectional: Single mothers recruited by County Health Department Tennessee, Nashville</td>
<td>16–41, 26</td>
<td>59</td>
<td>CES-D</td>
<td>59.3-Point prevalence of high depressive symptoms in single mothers</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>Brown, GW 1997, UK</td>
<td>Prospective Cohort: Single and married mothers</td>
<td>NR</td>
<td>117</td>
<td>PSE</td>
<td>16.0-Prevalence of incident depression in single mothers 7.9-Prevalence of incident depression in married mothers</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>Author</td>
<td>Year, Country</td>
<td>Study Sample Recruitment, Instruments</td>
<td>Age, yrs Range, Mean</td>
<td>Sample Size</td>
<td>Definition of Depression</td>
<td>Prevalence (%)</td>
<td>Other Results</td>
</tr>
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<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Browne, G</td>
<td>1997, Canada</td>
<td>Cross-sectional: Convenience Sample – Single mothers applying for social assistance Southwestern Ontario</td>
<td>NR</td>
<td>101</td>
<td>UM-CIDI; Hamilton</td>
<td>45.0-One-year prevalence of depression in new applicants for social assistance</td>
<td>Good</td>
</tr>
<tr>
<td>Davies, L.</td>
<td>1997, Canada</td>
<td>Cross-sectional: Population-based</td>
<td>NR; Single: 37</td>
<td>1,000</td>
<td>UM-CIDI</td>
<td>43.6-Lifetime prevalence of depression in single mothers 15.3-Lifetime prevalence of depression in married mothers</td>
<td>Good</td>
</tr>
<tr>
<td>Lipman, EL</td>
<td>1997, Canada</td>
<td>Cross-sectional: Population-based OHS-1990/1991</td>
<td>16–66, 36</td>
<td>1540</td>
<td>UM-CIDI</td>
<td>Single mothers were significantly more likely to have had major depression in the past year or ever</td>
<td>Good</td>
</tr>
<tr>
<td>Brown, GW</td>
<td>1993, UK</td>
<td>Prospective Cohort: Working class single mothers</td>
<td>NR</td>
<td>353</td>
<td>PSE</td>
<td>7.2-Prevalence of depression in working class single mothers</td>
<td>Good</td>
</tr>
<tr>
<td>Hall, LA</td>
<td>1991, US</td>
<td>Cross-sectional: Single mothers visiting county health department clinics</td>
<td>18–48, 26</td>
<td>225</td>
<td>CES-D</td>
<td>59.6-Prevalence of single mothers with high level of depressive symptoms</td>
<td>Good</td>
</tr>
<tr>
<td>Byrne, C</td>
<td>1998, Canada</td>
<td>Randomized Clinical Trial: Sole-support women applying for social assistance Southwestern Ontario</td>
<td>NR, 32</td>
<td>760</td>
<td>UM-CIDI-SF</td>
<td>45.4-One-year prevalence of depressive disorders among sole-support parents</td>
<td>Good</td>
</tr>
<tr>
<td>Markle-Reid, M</td>
<td>2002, Canada</td>
<td>Randomized Controlled Trial: Sole-support parents applying for social assistance Ontario</td>
<td>NR</td>
<td>126</td>
<td>UM-CIDI-SF</td>
<td>20.3-One-year prevalence of depression at 2 year follow-up in public health nursing intervention 18.3-One-year prevalence of depression at 2 year follow-up in self-directed intervention group</td>
<td>Fair</td>
</tr>
</tbody>
</table>

Abbreviations: CES-D – Centre for Epidemiologic Studies-Depression Scale  
CIS-R – Clinical Interview Schedule-Revised  
NPHS – National Population Health Survey  
NLSCY – Canadian National Longitudinal Survey of Children  
OHS – Ontario Health Survey, Mental Health Supplement  
PSE – Present State Exam  
(UM-)CIDI(-SF) – (University of Michigan-)Composite International Diagnostic Interview(-Short Form)
Chapter 14: Special Groups – Lesbian, Gay, Bisexual, Transgender and Transsexual Women (LGBTT)

Lori E. Ross and Leah Steele

Background

The relative rate of psychiatric disorders in homosexual as compared to heterosexual populations has been a controversial topic: until 1973, homosexuality was itself listed as a psychiatric disorder by the American Psychiatric Association, leading to structural pathologizing of sexual minorities (Cochran, S. D., 2001). However, there is increasing recognition of the role of perceived discrimination and social stigmatization in mental disorders in marginalized groups (Kessler, R. C., Mickelson, K. D., & Williams, D. R., 1999; Williams, D. R., 1999), including those with non-heterosexual orientations (Mays, V. M., & Cochran, S. D., 2001; Meyer, I. H., 1995). In particular, when a minority stress framework is applied to mental health, homophobia and heterosexism could be modulating variables (Meyer, I. H., 2003). The acknowledgement that disadvantaged social status could put sexual minorities at risk for psychological distress and mental health problems has led to an increase in research regarding relative risk for mental disorders in lesbian, gay, bisexual, transgender and transsexual (LGBTT) people.

Results

A search of the literature yielded 19 articles, one of which met eligibility criteria but was a ‘poor’ primary study. As discussed below, no Ontario- or Canada-specific data regarding the prevalence of depression among LGBTT women could be identified. As such, the primary sources of data for this section are 1) CCHS Cycle 2.1 data regarding the prevalence of non-heterosexual orientations among Canadian women; 2) international epidemiological studies that investigated the relationship between non-heterosexual orientations and lifetime or 12-month prevalence of depression; and 3) specific studies that discuss the barriers to mental health care in LGBTT women. Additional sources of grey literature for this section include studies by the Coalition for Lesbian and Gay Rights in Ontario (Coalition for Lesbian and Gay Rights in Ontario, 1997) and the Ontario Public Health Association (Gapka, S., & Raj, R., 2003).

Epidemiology Of Depression In LGBTT Women

Prevalence of Sexual Minority Women in Canada

Efforts to estimate the prevalence of sexual minorities are fraught with methodological challenges. Part of this difficulty results from the complex and variable definition of sexual orientation itself. For example, when measuring sexual orientation, researchers can choose to measure one or more of at least three different domains: sexual identity, sexual behaviour and sexual attraction. The estimated prevalence of sexual orientation will vary according to which domain is being measured. In general, studies that have measured sexual identity will find lower estimates of homosexuality than studies that measure sexual behaviours or attractions (White, J. C., 1998).
The Canadian Community Health Survey 2.1 (CCHS) is the first Statistics Canada survey that sought to estimate the prevalence of sexual minorities in Canada. The domain used by this survey was primarily that of sexual identity with the question being worded as follows: Do you consider yourself to be heterosexual (sexual relations with people of the opposite sex), homosexual, that is lesbian or gay? (sexual relations with people of your own sex), or bisexual? (sexual relations with people of both sexes). In response to this question, 0.7 per cent of women reported themselves to be homosexual and 0.9 per cent of women reported themselves to be bisexual (CCHS, 2004). In Ontario, 1.5 per cent of the total population (107,200 individuals) identified themselves as either homosexual or bisexual. These figures are considerably lower than the often quoted and often criticized prevalence of 10 per cent (for men) and 6 per cent (for women) that persists from the work of Alfred Kinsey. However they are consistent with the findings of other epidemiologic surveys from the US and the Netherlands.

There is good reason to believe that prevalence estimates from epidemiologic surveys will underestimate the true prevalence of minority sexual orientations. Indeed, as long as there is stigma associated with belonging to a sexual minority group, it will be difficult to determine the true rates of LGBTT identities. Accurate estimations of prevalence in epidemiologic surveys rely upon the truthful disclosure of sexual orientation to the interviewer. Many individuals may choose not to disclose their sexual orientation for privacy or safety reasons. Surveys like the CCHS, which require a participant to self-identify as homosexual will miss those individuals who have same-sex behaviours or attractions but do not consider themselves to be gay or lesbian. Furthermore, LGBTT individuals tend to cluster in urban areas in patterns that may not be accounted for by the stratification methods of Statistics Canada. Inappropriate weighting techniques could lead to inaccuracies in overall prevalence estimates.

There are no estimates of the number of Canadian transgender or transsexual women available. The only available prevalence estimate of transgender or transsexual women comes from European data which suggests that roughly one in 30,000 adult biological males seek sex-reassignment surgery. (DSM-IV-TR, 2000) This is likely to be a significant underestimate of the prevalence since many transgender or transsexual women will not seek surgery.

Prevalence of Depression among LGBTT Women

The first Canadian national survey to conduct structured diagnostic interviews with its participants for the purposes of evaluating the prevalence of mental illness in Canada was the Canadian Community Health Survey (CCHS) 1.2: Mental Health and Well-being. This survey did not include a question on sexual orientation and represents a missed opportunity for understanding differences and similarities in the mental health of LGBTT groups relative to heterosexual populations. The CCHS 2.1 did ask about sexual orientation, but this more recent survey contains limited information on respondents’ mental health. To date, no publications have used this data (which include a depression screening tool) to report the prevalence of depression in sexual minorities.

While no Canadian estimates of the prevalence of depression among LGBTT women have been published, data from the United States and the Netherlands indicate that lesbian, gay and bisexual people in general, and women in particular, may experience elevated rates of depression and other psychiatric disorders relative to heterosexual individuals.
Cochran & Mays (2000) examined the relationship between psychiatric disorders and having had at least one same-sex sexual partner in the prior year in the 1996 National Household Survey of Drug Abuse, an annual population-based survey intended to estimate the prevalence of substance use and other disorders among the non-institutionalized United States population aged 12 and older. Psychiatric disorders were assessed using a modified version of the CIDI. Among women with any same-sex partner in the prior year (N=96), 15.0 per cent met criteria for one-year prevalence of major depression. Although this rate was higher than the one-year prevalence of 8.4 per cent reported among women with opposite-sex partners only (N=5 792), this difference did not reach statistical significance (OR=1.94, 95% CI 0.86, 4.41).

Gilman et al. (2001) report data from the National Comorbidity Survey, a representative household survey of the population of the United States conducted between 1990-1992, in which participants were asked to report on same-sex sexual behaviour in the past five years. Psychiatric disorders according to DSM-III-R criteria were assessed with a modified version of the Composite International Diagnostic Interview (CIDI). A total of 1.5 per cent of women reported one or more same-sex sexual partners in the past five years (N=51). Results indicated a 12-month prevalence of major depression of 34.5 per cent among these women. This rate was significantly higher than the rate of 12.9 per cent reported among women with only opposite-sex partners in the past five years (N=2475) (OR=1.9, 95% CI 1.0, 3.3).

Cochran et al. (2003) report data from the MacArthur Foundation’s National Survey of Midlife Development in the United States, a nationally representative survey of adults aged 25-74 years in which participants were asked to describe their sexual orientation as heterosexual, homosexual, or bisexual. Psychiatric disorders were assessed using the Short Form of the CIDI. In total, 2.2 per cent of the women in the sample identified themselves as lesbian or bisexual (N=37). Of these women, 33.5 per cent met criteria for 12-month prevalence of major depression. Although this rate was higher than that reported among heterosexual women (16.8%, N=1 604), the difference was not statistically significant (Adjusted OR=1.88, 95% CI 0.71, 4.98). However, of the lesbian and bisexual women, 23.5 per cent met criteria for comorbidity of 2 or more disorders, relative to 7.7 per cent of the heterosexual women. This difference was statistically significant (Adjusted OR=2.88, 95% CI 1.02-8.15).

These American data are complimented by data from the Netherlands Mental Health Survey and Incidence Study (NEMESIS), a representative survey of the Dutch population aged 18 to 64 years, in which participants were asked to report the sex of their sexual partners in the preceding year (Sandfort, T. G., De, Graaf R., Bijl, R. V., & Schnabel, P., 2001). Psychiatric disorders according to DSM-III-R criteria were assessed using the CIDI. In total, 1.4 per cent (N=43) of the women in this sample reported same-sex sexual partners. Among this group, the 12 month prevalence of major depression was 11.6% per cent, in comparison to a rate of 7.3 per cent among heterosexual women (N=3077); the difference was not statistically significant (Adjusted OR=1.03, 95% CI 0.38, 2.80). Lifetime prevalence of major depression among women with same-sex sexual partners was 44.2 per cent. This was significantly higher than the rate of 20.0% reported in heterosexual women (Adjusted OR=2.44, 95% CI 1.24-4.72).

Some methodological limitations of these epidemiological surveys should be noted. While the surveys were large, the numbers of women who identified as homosexual in each survey ranged from 37 to 96. The small numbers led to relatively imprecise prevalence estimates for
mental disorders and consequently it is likely that in some cases these studies had insufficient power to show statistically significant differences between LGBTT and heterosexual groups. Three studies defined homosexuality using a “sexual behaviour” domain, while one study defined homosexuality using an “identity” domain. It is possible that the populations identified by these two definitions differ in important ways such that prevalence estimates may not be comparable across studies. As is the case with all sensitive topics, estimates of sexual orientation require individuals to divulge truthfully to an interviewer. This may result in social desirability bias, which could lead either to an underestimation of differences between gay/lesbian and other groups (if non-disclosing gay/lesbian are also more likely to be depressed, but are included in the rates for the general population) or to an overestimation of differences between gay/lesbian groups (if individuals who are willing to identify as gay/lesbian are also more likely to be depressed).

No epidemiological surveys have collected information about the gender identity of participants, and as such, no population-based estimates of the prevalence of depression among transgender and transsexual women are available. Literature on the prevalence of depression among transgender and transsexual people are typically derived from clinical samples seeking sex-reassignment medical care (Cole, C. M., O’Boyle, M., Emory, L. E., & Meyer, W. J., III, 1997) and as such are unlikely to be representative of the total population of transgender and transsexual women. Additional population and community-based research is required to determine the mental health needs of transgender and transsexual women.

**Barriers to Care for Depression in LGBTT Women**

No Canadian data studies have systematically assessed barriers to mental health care among LGBTT women. However, there are indications that Canadian LGBTT people face significant barriers to accessing health care in general, and many of these barriers could be relevant for LGBTT women with depression. For example, in the CCHS Cycle 2.1, 21.8 per cent of homosexual and bisexual individuals aged 18 to 59 reported that they had an unmet health care need in 2003. This figure is nearly twice the proportion of the number of heterosexual individuals in the same age range (12.7%) (CCHS 2004).

When considering general health care services, LGBTT women often face personal and cultural barriers to access that lead to delays in seeking care and preventive services. Barriers include the fear of disclosing sexual orientation to providers, a lack of cultural competency among health care providers and a lack of LGBTT appropriate services (Solarz, A., 1999; White, J. C., & Dull, V. T., 1997).

Qualitative research has demonstrated that LGBTT women who have disclosed their sexual orientation to their primary care provider are more likely to seek health care and more likely to be comfortable discussing sensitive issues. (White, J. C., & Dull, V. T., 1997) However a significant proportion of LGBTT women have difficulty or are unable to disclose their sexual orientation to their physicians when they seek medical care. In 1995, the Coalition for Lesbian and Gay Rights in Ontario received federal funding to undertake a study to identify and address the health-care and social service needs of sexual minorities in Ontario (Coalition for Lesbian and Gay Rights in Ontario, 1997). As part of this project, an anonymous questionnaire was developed, piloted and circulated to individuals belonging to sexual minorities across the province. Of the 1,233 completed surveys, 51 per cent of the respondents reported failing to
consistently disclose their sexual orientation to their health care providers although 91 per cent believed it was important to do so. Patient factors such as fear or embarrassment around disclosure of orientation may inhibit communication with providers (Geddes, V. A., 1994).

Discrimination based on sexual orientation, either at an institutional or individual level, may be a primary barrier to appropriate care for many LGBTT people. Both actual and perceived or anticipated discrimination may deter LGBTT people from seeking care, or may reduce the quality of the care provided. For example, in a 1994 survey of more than 700 lesbian, gay and bisexual physicians in the United States, two-thirds reported knowing of patients who were denied or given substandard care by physicians due to their sexual orientation; (Schatz, & O’Hanlan 1994, as cited in Jones & Gabriel 1999). In the same study, 88 per cent of respondents said they had heard colleagues disparage gay or lesbian patients because of their sexual orientation. Since psychiatry was the sub-specialty in which the greatest amount of discrimination was reported, this barrier may pose a particular problem for LGBTT women seeking mental health services. In addition to negative provider attitudes, provider comfort and competency in LGBTT health are paramount for improving care in this population. Despite the importance of disclosure for appropriate health care, only 24 per cent of lesbian or bisexual women in Ontario had been asked by their family physicians about their sexual orientation.

No Canadian studies have systematically assessed satisfaction with mental health services among LGBTT women. In an American study of 67 LGBTT people with severe and persistent mental illness conducted in 2000 (Avery, A. M., Hellman, R. E., & Sudderth, L. K., 2001), 17.6 per cent were dissatisfied with the mental health services they had received. This proportion was significantly higher than the 8 per cent of heterosexual individuals with severe mental illness who had been surveyed in a previous study. Among lesbian and bisexual women, 21.7 per cent reported being dissatisfied with their mental health services; only 7.2 per cent of heterosexual women reported dissatisfaction. LGBTT racial minorities were also significantly more likely than heterosexual racial minorities to express dissatisfaction with mental health care, emphasizing the importance of considering intersections between sexual orientation, sex, and ethnicity in conducting mental health research with LGBTT people.

Despite potential barriers to and/or dissatisfaction with mental health care, numerous studies have indicated that lesbians use counselling services at greater rates than do heterosexual women (Bradford, J., Ryan, C., & Rothblum, E. D., 1994; Morgan, K. S., 1992). For example, among an American sample of 1,633 lesbians recruited through convenience sampling, almost 80 per cent reported having received counseling some time in their lives (Sorensen, L., & Roberts, S. J., 1997). Twenty-eight per cent of these women noted depression as the primary reason they sought counselling. However, it appears that this difference is at least in part due to more positive feelings toward seeking counselling among lesbians relative to heterosexual women, rather than simply due to increased need among LGBTT women (Morgan, K. S., 1992). For example in the survey by Sorenson & Roberts (1997), less than five per cent of the sample reported having been hospitalized for psychiatric reasons.

These trends have been replicated in large representative community surveys. In the 1996 National Household Survey of Drug Abuse, Cochran & Mays (2003; 2000) found that 15.1 per cent of women with same-sex sexual partners reported having sought mental health or substance use services in the preceding year; this was significantly greater than the 6.3% per
cent of women with only heterosexual sexual relationships (Adjusted OR=2.90, 95% CI 1.26, 6.70). This finding was replicated again in the analysis of the National Survey of Midlife Development in the United States, in which lesbian and bisexual women were more likely to report mental health-related treatment use in the year prior to interview (Cochran, S. D., Mays, V. M., & Sullivan, J. G., 2003). Approximately two-thirds of the lesbian and bisexual women surveyed reported accessing at least one type of mental health care, with nearly a third reporting seeing a mental health-care provider. However, there was no statistically significant difference in the proportion of women who had taken a psychiatric medication in the preceding year (19.2% of lesbian/bisexual women, 13.5% of heterosexual women). When psychological status was considered, lesbian and bisexual women who either met diagnostic criteria for any psychiatric disorder or reported a high level of current distress were significantly more likely than heterosexual women to report receiving mental health services (Adjusted OR=14.54, 95% CI 1.67-126.44).

These data suggest that openly-identified lesbian and bisexual women are more likely than heterosexual women to have their mental health needs met. However, the available data do not enable a comparison of the satisfaction of LGBTTT people with publicly funded, mainstream mental health services in comparison to satisfaction with services provided through specialized treatment centres for LGBTTT people or private psychotherapists who are members of or known to the LGBTTT communities. Barriers to care and satisfaction with services among LGBTTT women could be markedly different depending on the nature of the mental health service accessed. Further, the data do not allow for an assessment of barriers to care and satisfaction with mental health services for those individuals who were not willing to identify themselves to researchers as LGBTTT. There may be systematic differences between those LGBTTT individuals who identify themselves and those who do not identify themselves in both barriers to care and satisfaction with mental health care. Finally, the studies reviewed here do not provide an assessment of barriers to care and/or satisfaction with mental health care among transgender and transsexual women. Research on general health care for transgender and transsexual people suggests that these individuals may face significant barriers, including socio-economic variables (e.g., inability to access health services due to lack of concordance between current gender identity and sex noted on legal identification) and interpersonal barriers (e.g., transphobia from physicians and other health care providers) (Gapka, S. & Raj, R., 2003). These barriers are likely also applicable to mental health services.

**Knowledge Gaps**

- This review has identified significant gaps in the research related to depression among LGBTTT women in Ontario. First, no epidemiological studies have been conducted to estimate the prevalence of depression among Ontario LGBTTT women using structured diagnostic interviews. Considering the very different social context for LGBTTT people in Ontario in comparison to the United States (e.g., access to legal marriage), and the relationship between societal discrimination and mental health among LGBTTT people (Mays & Cochran 2000), it is conceivable that American data cannot be generalized to Ontario women. Future epidemiological surveys should assess not only self-identified sexual orientation, but also same-sex sexual behaviour and sexual attraction in order to provide a comprehensive study of mental health outcomes among sexual minority women in Canada.
• Secondly, no Canadian studies are available to provide an assessment of barriers to mental health care or satisfaction with mental health care among LGBTT women. It is not clear whether the high rates of utilization of counseling services among American lesbian, and bisexual women will be consistent among Canadian women, in the context of both our differing socio-political environment, and our publicly-funded health-care system. Assessment of publicly funded, mainstream mental health services is particularly critical in order to ensure that those individuals who cannot afford or do not have geographic access to services specialized for the LGBTT communities have access to appropriate mental health care.

• Due to the small sample sizes in the studies reported here, bisexual women were often grouped together with lesbians in order to compare them with heterosexual women. This may be inappropriate in that preliminary evidence suggests that bisexual women may report increased rates of psychological problems relative to heterosexual women (Cochran, S. D., 2003). Further research with adequate numbers of bisexual women is required to determine the prevalence of depression and mental health service utilization patterns of bisexual women.

• Finally, research on the mental health status and mental health service needs of transgender and transsexual women is almost non-existent. Although the population of transgender and transsexual women is small relative to the total population of Ontario, these women may have complex health and mental health needs (Gapka, S. & Raj, R., 2003). Methodologically-sound research with community-based (rather than clinic-drawn) samples is needed to begin to assess the mental health needs of transgender and transsexual women.

Implications for Policy-Makers and Health-Care Providers

The results of this review indicate that LGBTT women may be at elevated risk for depression relative to heterosexual women, and that discrimination in the form of homophobia and heterosexual contribute to this elevated risk. As such, social policies which ensure just treatment of LGBTT people, both at the interpersonal and institutional levels, will promote mental health for LGBTT women. Such policies include recent advancements in legal recognition of same-sex marriage, and charter protection from discrimination on the basis of sexual orientation. Current policy in Ontario has less adequately addressed discrimination of transgender and transsexual people on the basis of gender identity, and challenges of relevant policies (e.g., lack of coverage of sex reassignment surgery by the Ontario Health Insurance Plan) are currently before the courts.

Besides policy changes to ensure safe social environments for LGBTT people, changes are needed to ensure that mental health services provide appropriate and accessible care to their LGBTT clients. Such changes would include:

• Education to health-care providers, and particularly mental health-care providers, about provision of appropriate care to LGBTT people, including sensitive methods to encourage disclosure of sexual orientation (see “Asking the Right Questions”, Centre for Addiction & Mental Health).

• Increased accessibility of counseling services for this population, to be covered by OHIP, in order to address some of the psychosocial issues which often contribute to depression among LGBTT people (e.g., disclosure of sexual orientation, strained relationships with families of origin due to homophobic attitudes, experiences of violence related to homophobic discrimination).
• Where feasible (i.e., in areas with large LGBTT communities) LGBTT community health centres should be established to provide holistic mental- and physical-health care of specific relevance to LGBTT people.

• In areas without large LGBTT communities, infrastructure could be provided to enable health networking among LGBTT-knowledgeable health-care providers across disciplines and across areas of the province.

Finally, current data collection methods make it impossible to track the mental health status of LGBTT people over time. In order to evaluate the effectiveness of any interventions introduced to promote mental health and health service utilization among LGBTT people, more appropriate and comprehensive data collection methods must be introduced. This would involve including questions about both sexual orientation and gender identity on national and provincial epidemiological surveys such as the CCHS. These questions should be comprehensive and assess not only sexual and gender identity, but also sexual behaviour and sexual attraction. In order to ensure that the indicators are worded appropriately and to promote maximum disclosure by respondents, questions should be developed in consultation with federal and provincial LGBTT health advocacy organizations such as the Canadian Rainbow Health Coalition and the Coalition for Lesbian and Gay Rights in Ontario. Further, LGBTT people should be oversampled as necessary to allow for meaningful analyses of health status by sexual orientation, and to allow for desegregation of data by other relevant intersecting variables, including socio-economic status, race/ethnicity, and age (Jackson, 2005) paper in progress, Rainbow Health Network of the Coalition for Lesbian and Gay Rights in Ontario)
CHAPTER 15: SPECIAL GROUPS – LOWER SOCIO-ECONOMIC STATUS

Fiona Webster

Background

Socio-economic status (SES) refers to social and economic circumstances which are used to denote a ranking of individuals or groups in society (Statistics Canada, 2002). The link between SES and depression is well established, with persons of lower socio-economic status being at higher risk for many forms of mental illness (DesMeules, M. et al., 2004; Cairney, J. & Wade, T. J., 2002b; Turner, R. J., Lloyd, D. A., & Roszell, P., 1999; Byrne, C. et al., 1998; Murphy, J. M. et al., 1991). The link between gender and depression is similarly well established, with women diagnosed and reporting more episodes of depression and/or depressive symptoms than men, regardless of other demographic factors (Savoie, I., Morettin, D., Green, C. J., & Kazanjian, A., 2004; Browne, G. et al., 1997). However, the link between socio-economic status, gender and depression is surprisingly under-researched.

Socio-economic status is complex and difficult to determine. A composite risk index (SERI) was developed for the Population Health Information System, Statistics Canada. From a set of socio-economic indicators derived from public use census data, a summary index was formed from six indicators to generate profiles for regions of each province. Based on 1986 and 1991 indicators, indicators were grouped into six domains: dwelling characteristics, education, employment, income, mobility and social characteristics. Income, education, occupation and property are also considered standard measurements of SES. Geography can be used as a proxy for SES as can material possessions, including home ownership.

Socio-economic status is not researched by general population in the literature, but is instead reported in relation to specific populations. For example, SES and depression has been analyzed in relation to sole-support mothers who are on social assistance (Byrne, C. et al., 1998; Coyle, JT, 1985), depressed women who suffer from alcohol and drug abuse (Gagnon, L. M. & Patten, S. B., 2002) women in the postpartum period (Seguin, L., Potvin, L., St-Denis, M., & Loiselle, J., 1999) and women of different age groups (Cairney, J., & Wade, T. J., 2002a).

One systematic review examined the role of gender as a health determinant of hospitalization for depression (Savoie, I., Morettin, D., Green, C. J., & Kazanjian, A., 2004). However, this review did not stratify by sex and was therefore not included in this review. The researchers were unable to provide information that linked SES and gender as “the diversity of variables used made comparison across studies difficult.” For example, the researchers note that one study used the variable of home ownership as a variable that was linked to prevalence rates for hospitalization for depression.

Results

Fifty two articles were reviewed using the keywords listed in Appendix A. The majority of articles (44) were excluded because they did not specifically report prevalence of depression or barriers to care for women by socioeconomic status or by sex. Of these excluded articles, several were
useful as background in terms of providing information regarding the complexity of how SES is determined as well as the difficulties in establishing the directionality of various social determinants of health.

An important barrier to conducting meta-analyses of SES and depression in women is linked to the diversity of variables used to determine SES. For example, one study used education level and income (Patten, S. B., 2001), another study used the material possession of household objects (Murphy, J. M. et al., 1991), while another study used the term “poverty” rather than SES to discuss women on welfare (Byrne, C. et al., 1998). Walters (1993) did not use any clinical measures of depression.

Of the included articles, there were no meta-analyses or systematic reviews. The grey literature search did not turn up any relevant documents. Of the remaining eight articles for inclusion, five were of “good” quality, two were “fair” and one was ‘poor’ (Table 15.1). All eight were Canadian primary studies. Each of the eight studies is summarized below.

**Epidemiology of Depression among Low Socio-economic Status Women**

Murphy et al. (1991) published a prospective epidemiologic study of depression and anxiety in relation to social status. It is important to note that the results from this study are based on small numbers and the tool used to identify depression has not been validated. The standardized point prevalence rates (per 100), in 1952, for women by SES were 4.7 per cent (high SES), 3.5 (average), 15.3 per cent (low).

The standardized incidence rates for depression (average annual rate per 1,000), between 1952 and 1968, for women by SES were 0.8 (high SES), 2.3 (average), 4.8 (low). The standardized incidence rates for depression (average annual rate per 1,000), between 1952 and 1968, for men by SES were 1.1 (high SES), 1.6 (average), 4.9 (low).

In addition, Murphy (1991) found the percentage of participants with a poor clinical course was much greater at low SES levels (86%) than at high SES levels (50%). However, the relationship between SES and depression was not significant different between the sexes. It should be noted that effective anti-depressants were not available until 1957 (Gagnon, Lisa M., & Patten, Scott B., 2002).

Turner, Lloyd and Roszell (1999) analyzed data collected from a cross-sectional survey carried out in Toronto in 1990-1991. Women had higher rates than men of major depressive disorder (13.6 % vs. 8.1%). Increasing levels of occupational prestige were significantly associated with decreasing levels of depression and this pattern was found to be similar among women and men.

Patten (2001) analyzed data on depressive syndrome in a Western Canadian community population. The data were collected from a random sample (n= 2,542 households) using telephone interviews in 1998-1999. The prevalence of depressive syndrome was higher among women than men in all age categories. Among respondents <25 years of age the rates were 25.0 per cent for women and 13.4 per cent for men. Depressive syndrome was found to be strongly associated with involuntary unemployment, lower education, and lower income. These associations persisted following adjustment for potential confounders including sex.
Unfortunately, the rates of depression by SES (education or income) were not reported for women and men separately as part of the analyses.

Seguin et al. (1999) reported on the results from a small short-term Montreal-based longitudinal study that examined the relationship between SES and postnatal depressive symptomatology. At the third week postpartum, depressive symptomology was similar among low SES mothers (23.7%) and high SES mothers (22.2%). By the ninth week postpartum, however, depressive symptomatology was still high among low SES mothers (21.3%) but had declined among high SES mothers (8.3%). This is an interesting study that requires validation.

Walters (1993) assessed depression, anxiety and stress among a stratified random sample of women in Hamilton, Ontario in 1990-1991. Depression rates were higher among women with family incomes under $30,000 (42.1%) and between $30,000-$49,000 (38.4%) compared to those with family incomes $50,000+ (28.1%). Among these women, rates of depression also varied by level of education. Depression rates by education level were as follows: no certificate (42.2%), secondary school (27.4%), trade non-university (41.8%) and university (28.0%).

Cairney and Wade (2002b), analyzed the National Population Health Survey to examine the influence of age on gender differences. The 12-month prevalence of major depressive episode was higher among women (9.0%) compared to men (4.2%) for respondents 15-54 years of age. The 12-month prevalence of major depressive episode was higher among women (3.9%) compared to men (1.9%) for respondents 55+ years of age. Being a woman, having lower income and lower education than men, were all independently associated with higher rates of depression even after adjusting for many other factors.

Byrne et al. (1998) interviewed 760 sole-support parents (96.7% women) who had applied for social assistance in either of two regions within southwestern Ontario in 1994-1995. The 12-month prevalence rate of depressive disorders among these parents was 45.4 per cent. The high school education levels did not differ between parents with, and those without, depressive disorder.

Browne et al. (1997) examined a subset of 101 of the sole-support parents in the Byrne et al. (1998) study described above. This subset was comprised of poor single mothers who were new applicants for general welfare assistance. The 12-month prevalence of depression among these women was 45 per cent. Participants with MDD and those with double depression (MDD plus dysthymia) had lower annual health expenditures for ambulatory visits but higher expenditures for hospital days, possibly reflecting real or perceived barriers to accessing effective outpatient services. In addition, Browne found that women on general welfare without depression indicated that they most wanted child care and job training, those with double depression wanted counseling.

In summary, then, three primary studies reporting on the association between lower SES and depression found that lower SES was positively linked to higher rates of depression for both women and men (Patten, S. B., 2001; Turner, R. J., Lloyd, D. A., & Roszell, P., 1999; Murphy, J. M. et al., 1991) and sex did not alter this association. It becomes important, therefore, to understand not only whether women or men are more likely to have more involuntary unemployment, lower education and lower income, but also to understand the differential way in which such factors influence their rates of depression and treatment.
When comparing specific groups of women, differences in rates of depression were found by SES. For example, Walters (1993) reported higher rates of depression for women by educational level in the general population while Byrne et al. (1998) did not find an association between education level and rates of depression for sole support mothers on social assistance. They did, however, report that older women on social assistance were more likely to be depressed. Cairney and Wade (2002b) found that being a woman, lower income and lower education were all independently associated with higher rates of depression even after adjusting for many other factors.

**Barriers to Care for Depression in Low Socio-economic Status Women**

Access to care was not addressed in any of the articles reviewed. Savoie et al. (Savoie, I., Morettin, D., Green, C. J., & Kazanjian, A., 2004) analyzed utilization in only one study, specifically related to hospitalizations for depression. This study could not be included as rates were not stratified by sex and SES. The authors made the recommendation that families on social assistance facing multiple disadvantages require a comprehensive and proactive effort to meet their needs, but failed to specify what form such efforts would take. The relationship (direction and causation) between low SES and depression among women is not well understood. Prevalence rates are not clearly established in this population. This is an important knowledge gap as we know that sex and lower SES separately are significantly related to both increased risk for depression and access to treatment in the general population.

**Knowledge Gaps**

- By consistently defining the measure of SES, we would be able to better determine prevalence and identify specific barriers to care for these women.
- There is a need for well designed studies specifically looking at SES, gender and depression in Ontario and Canadian women.

**Implications for Policy-makers and Health-Care Providers**

- The impact of lower SES on women’s mental health needs to be considered when developing programs for specific groups of women, such as those in the postpartum period, sole support mothers, and women living in rural areas.
- Topics not specifically addressed in the literature reviewed, such as the effect of lower SES on the ability to access antidepressant drugs, non-physician administered psychotherapy, and transportation costs to therapy should be considered in future research and policy.
Table 15.1: Characteristics of Included Primary Articles – Lower Socio-economic Status

<table>
<thead>
<tr>
<th>Author</th>
<th>Year, Country</th>
<th>Study Sample Recruitment</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patten, SB</td>
<td>2001, Canada</td>
<td>Cross-sectional: Population-based Calgary, Alberta</td>
<td>18–91, 39</td>
<td>2542 Women and Men</td>
<td>CIDI-SFMD</td>
<td>42.0-Prevalence of depression in lowest income individuals 25.0-Prevalence of depression in women under 25 years of age</td>
<td>Good</td>
</tr>
<tr>
<td>Seguin, L</td>
<td>1999, Canada</td>
<td>Prospective Cohort: Convenience Sample - Prenatal/ Ultrasound Clinic patients Montreal, Quebec</td>
<td>18, NR</td>
<td>116</td>
<td>BDI</td>
<td>21.3-Point prevalence of low SES women with PPD symptoms 8.3-Point prevalence of high SES women with PPD symptoms at 9 weeks postpartum</td>
<td>Fair</td>
</tr>
<tr>
<td>Murphy, JP</td>
<td>1991, Canada</td>
<td>Prospective Cohort: Population-based Atlantic Canada</td>
<td>NR</td>
<td>593 Women and Men</td>
<td>DPAX</td>
<td>12.7-Point prevalence of depression in women of low SES at study's end 4.6-Point prevalence of depression in women of high SES at study's end</td>
<td>Fair</td>
</tr>
<tr>
<td>Byrne, C</td>
<td>1998, Canada</td>
<td>Randomized Clinical Trial: Sole-support women applying for social assistance Southwestern Ontario</td>
<td>NR, 32</td>
<td>760</td>
<td>UM-CIDI-SF</td>
<td>45.4-One-year prevalence of depressive disorders among sole-support parents</td>
<td>Good</td>
</tr>
<tr>
<td>Browne, G</td>
<td>1997, Canada</td>
<td>Cross-sectional: Convenience Sample – Single mothers applying for social assistance Southwestern Ontario</td>
<td>NR</td>
<td>101</td>
<td>UM-CIDI; Hamilton</td>
<td>45.0-One-year prevalence of depression in new applicants for social assistance</td>
<td>Good</td>
</tr>
</tbody>
</table>

Abbreviations: NR – Not Reported  
BDI – Beck Depression Inventory  
CES-D – Centre for Epidemiologic Studies – Depression Scale  
PPD – Postpartum Depression  
UM-CIDI-(SFMD) – (University of Michigan)–Composite International Diagnostic Interview-(Short Form Major Depression)  
DPAX – Depression Anxiety Computer Program  
Hamilton – Hamilton Rating Scale  
PPD – Postpartum Depression  
UM-CIDI-(SFMD) – (University of Michigan)–Composite International Diagnostic Interview-(Short Form Major Depression)
CHAPTER 16: SPECIAL GROUPS – COMORBID PHYSICAL ILLNESS

BRITTANY POYNTER AND SHERRY L GRACE

BACKGROUND

The following section will focus on six chronic illnesses which represent the leading causes of death and disability among Ontario women (Statistics Canada, 2002): namely, heart disease, stroke, cancer, respiratory illness, diabetes and musculoskeletal disorders. Comorbid medical conditions can cause, perpetuate, or result from depression (Leon, F. G. et al., 2003). Data from the National Population Health Survey (NPHS), where 11,859 Canadians were surveyed for major depression and chronic medical illness, show that having a chronic condition approximately doubles the risk of major depression (Gagnon, L. M. & Patten, S. B., 2002; Patten, S. B., 2001). Depressive disorders are present in 36 per cent of patients with co-existent medical conditions and more prevalent among elderly patients (50%) (Katon, W., 2003; Patten, S. B., 1999; Franco-Bronson, K., 1996). However, there is a paucity of studies focusing on women with depression and comorbid physical illness. In one Canadian study of 2542 women, the prevalence ratio for a major depressive syndrome in those with, versus without, long-term medical conditions was 1.32 (95% CI 1.06 – 1.65) (Leon, F. G. et al., 2003).

In general, the connection between mental health and physical illness is poorly understood. Most researchers agree that a biopsychosocial interaction is most plausible. For example, in hypothyroidism and metabolic disturbances, physiologic imbalances may result in psychiatric symptoms (Katon, W., 2003; Patten, S. B., 2001; 2000; Patten, S. B., 1999; Franco-Bronson, K., 1996). In other instances, a depressed mood may negatively impact one’s health behaviour. For example, one may be more inclined to smoke, and less inclined to eat well, exercise regularly, and be compliant with medications (Katon, W., 2003; DiMatteo, M. R., Lepper, H. S., & Croghan, T. W., 2000). A meta-analysis by Dimatteo and others (2000), found that medically ill patients with major depression were three times more likely to be non-adherent to medical treatment recommendations than non-depressed medically ill patients (American Heart Association, 1999).

HEART DISEASE

BACKGROUND

Heart disease (HD) is the leading cause of death by a major disease among Ontarian Women (Public Health, 2005). It is predicted that by the year 2020, the top two contributors to the worldwide burden of disease will be ischemic heart disease (IHD) and depression (Bankier, B., & Littman, A. B., 2002). After HD onset, the prognosis is worse for women than men (Grace, S. L. et al., 2005). Depressed women may be at a heightened risk of having cardiac symptoms minimized or attributed to their psychological state (Schwartzman, J. B. & Glaus, K. D, 2000).
Results

Our literature search identified four meta-analyses, three systematic reviews and two Canadian primary sources that met our inclusion criteria. One of the meta-analyses was given a “poor” rating on the quality assessment, one meta-analysis received a “fair” rating (Barth, J., Schumacher, M., & Herrmann-Lingen, C., 2004) and two received a “good” rating (Table 16.1). The systematic reviews were all rated as “poor” (Table 16.1) and two Canadian primary articles received “good” ratings on the quality assessment (Table 16.2).

Risk Factors for Depression among Women and Heart Disease

Two meta-analyses concluded that depression is an independent risk factor for the development of HD in initially healthy men and women (Wulsin, L. R. & Singal, B. M., 2003; Rugulies, R., 2002). This relationship is stronger for clinical depression than for depressive symptoms alone. Wulsin and Singal (2003) demonstrated an overall relative risk of 1.64 (95% CI 1.41-1.90) of depression leading to the onset of HD. A recent study conducted by Yusuf et al. (2004), recruited 15,152 cases and 14,820 controls and examined the role of gender differences in depression as a risk factor for HD. They found psychosocial factors (including depression) increased the risk of mental illness (MI) in women by 40 per cent (95% CI 28.6 - 52.6), but only 25.3 per cent (95% CI 18.2 – 34.0) in men (Yusuf, S. et al., 2004) (Table 16.1).

Table 16.1: Association of Risk Factors with Acute Myocardial Infarction in Men and Women after Adjustment for Age, Sex, and Geographic Region (taken from (Yusuf, S. et al., 2004))

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Sex</th>
<th>Control (%)</th>
<th>Case (%)</th>
<th>Odds ratio (99%CI)</th>
<th>PAR (99%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current smoking</td>
<td>F</td>
<td>9.3</td>
<td>20.1</td>
<td>2.96 (2.36-3.48)</td>
<td>15.8% (12.9-19.3)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>33.0</td>
<td>53.1</td>
<td>3.05 (2.78-3.33)</td>
<td>44.0% (40.9-47.2)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>F</td>
<td>7.9</td>
<td>25.5</td>
<td>4.26 (3.51-5.18)</td>
<td>19.1% (16.8-21.7)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>7.4</td>
<td>16.2</td>
<td>2.67 (2.36-3.02)</td>
<td>10.0% (8.9-11.4)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>F</td>
<td>28.3</td>
<td>53.0</td>
<td>2.95 (2.57-3.39)</td>
<td>35.8% (32.1-39.6)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>19.7</td>
<td>34.6</td>
<td>2.32 (2.12-2.53)</td>
<td>19.5% (17.7-21.5)</td>
</tr>
<tr>
<td>Abdominal obesity</td>
<td>F</td>
<td>33.3</td>
<td>45.6</td>
<td>2.26 (1.90-2.68)</td>
<td>35.9% (28.9-43.6)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>33.3</td>
<td>46.5</td>
<td>2.24 (2.03-2.47)</td>
<td>32.1% (28.0-36.5)</td>
</tr>
<tr>
<td>Psychosocial index</td>
<td>F</td>
<td>-</td>
<td>-</td>
<td>3.49 (2.41-5.04)</td>
<td>40.0% (28.6-52.6)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>-</td>
<td>-</td>
<td>2.58 (2.11-3.14)</td>
<td>25.3% (18.2-34.0)</td>
</tr>
<tr>
<td>Fruits/veg</td>
<td>F</td>
<td>50.3</td>
<td>39.4</td>
<td>0.58 (0.48-0.71)</td>
<td>17.8% (12.9-24.1)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>39.6</td>
<td>34.7</td>
<td>0.74 (0.66-0.83)</td>
<td>10.3% (6.9-15.2)</td>
</tr>
<tr>
<td>Exercise</td>
<td>F</td>
<td>16.5</td>
<td>9.3</td>
<td>0.48 (0.39-0.59)</td>
<td>37.3% (26.1-50.0)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>20.3</td>
<td>15.8</td>
<td>0.77 (0.69-0.85)</td>
<td>22.9% (16.9-30.2)</td>
</tr>
<tr>
<td>Alcohol</td>
<td>F</td>
<td>11.2</td>
<td>6.3</td>
<td>0.41 (0.32-0.53)</td>
<td>46.9% (34.3-60.0)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>29.1</td>
<td>29.6</td>
<td>0.88 (0.81-0.96)</td>
<td>10.5% (6.1-17.5)</td>
</tr>
<tr>
<td>ApoB/ApoA1 ratio</td>
<td>F</td>
<td>14.1</td>
<td>27.0</td>
<td>4.42 (3.43-5.70)</td>
<td>52.1% (44.0-60.2)</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>21.9</td>
<td>35.5</td>
<td>3.76 (3.23-4.38)</td>
<td>53.8% (48.3-59.2)</td>
</tr>
</tbody>
</table>
Following a coronary event, Canadian women suffer more often from depression than men, which can be detrimental to their prognosis (Frasure-Smith, N., Lesperance, F., Juneau, M., Talajic, M., & Bourassa, M. G., 1999). At the time of admission to hospital, 47 per cent of female cardiac patients reported being depressed compared to 26% of men (Bankier, B. & Littman, A. B., 2002). Moreover, women experience greater depressive symptoms than men for at least a full year after HD onset (Bankier, B., & Littman, A. B., 2002) (See Figure 16.2); yet, of the women who met criteria for depression, only 21.2 per cent received treatment in the first year after their MI (Glassman, A. H. et al., 2002).

Two meta-analyses demonstrate poorer HD prognosis among women and men with comorbid depression. Van Melle and others (2005) reviewed 22 studies and found that depression after MI was associated with a two to 2.5 fold increased risk of impaired cardiac outcome including all-cause mortality and cardiovascular events.

Similarly, Barth et al. (2004) concluded that depression doubled the risk of all-cause mortality in patients with heart disease (HD) in the short and long-term (Barth, J., Schumacher, M., & Herrmann-Lingen, C., 2004).

**Barriers to Care for Depression in Women and Heart Disease**

While selective serotonin reuptake inhibitor anti-depressants have been shown to be safe for women and men heart patients (Grace, S. L. et al., 2005), this does not hold true for psychotherapeutic treatments. Results from the M-HART trial of a psychosocial home nursing
intervention (Brezinka, V., & Kittel, F., 1995), and recent post-hoc subgroup analyses from the ENRICHD trial of cognitive behavioral therapy (Lavie, C. J., Milani, R. V., Cassidy, M. M., & Gilliland, Y. E., 1999) both revealed that interventions to address depression may be more effective in men than women, and some may even be detrimental for women.

A narrative review on women and depression in HD by Schwartzman and Glaus (2000) calls for further quality research to examine the possible protective versus detrimental role of psychotherapy on women’s HD prognosis. Moreover, the review explain, practitioners and public health programs should aim to take a proactive role in educating the depressed female patient about her increased risk of HD and MI. Women are often delayed in seeking medical attention for HD because they fail to distinguish their symptoms as a cardiac syndrome. Women presenting with complaints of chest pain receive much less aggressive treatment than men and are subsequently much less likely to be referred to specialists. A primary Canadian study by Stewart et al. (2004) showed that women want more information and a larger role in decision-making about their heart disease than men and that better information is associated with less depression and better adherence to lifestyle modifications.

Deficits in quality of care may in part explain the excess mortality seen in post-MI depressed women (van Melle, J. P. et al., 2005; Barth, J., Schumacher, M., & Herrmann-Lingen, C., 2004). Grace and others (2005) suggest that cardiac rehabilitation (CR) programs, which include both psychotherapeutic interventions and physical exercise, can reduce depression and increase adherence to treatment regimens, but are grossly underutilized in women and depressed patients. Today, there is a growing concern to identify the barriers women face in participating in and benefiting from CR programs. Evidence suggests that a referral failure may play a key role (Grace, S. L. et al., 2005; Grace, S. L. et al., 2002); For instance, 20 per cent fewer women are enrolled in CR programs than men (Grace, S. L. et al., 2002). Yet, the prevalence of depression in women drops from 23 per cent to 12 per cent after CR participation (Provinciali, L. & Coccia, M., 2002). Other barriers that prevent women from participating in CR programs include old age, lower income, and caring for dependents (Gall, A., 2001). Considering the sound evidence for the multifaceted mood benefits of CR programs, resources to improve accessibility and participation for women is crucial (Fujikawa, T., Yamawaki, S., & Touhouda, Y., 1993).

**Stroke**

**Background**

independent risk factor preceding stroke is just starting to be explored in scientific literature. It should be mentioned that other neurological diseases such as multiple sclerosis, Parkinson’s disease and epilepsy are also highly correlated with an increased prevalence of depression. Although not a focus of our research, these illnesses should be noted in terms of comorbid depression risk.

**Results**

Despite the volume of literature surrounding stroke and depression, no meta-analyses, systematic reviews, or Canadian primary articles met our inclusion criteria. Four international primary studies (one ‘good’ and three ‘fair’) were included (Table 16.2). Many articles were excluded as they were narrative reviews, or did not stratify their analyses by sex.

**Risk Factors for Depression among Women and Stroke**

Support for depression being an independent risk factor for stroke is a relatively new phenomenon (Ramasubbu, R. & Patten, S. B., 2003; Wassertheil-Smoller, S. et al., 1996). Wassertheil-Smoller and colleagues followed a cohort of 4,367 healthy adults (2,483 women) over age 60 years for depressive symptoms and subsequent stroke (Wassertheil-Smoller, S. et al., 1996). Although baseline depression did not seem to affect stroke outcome, they state that worsening depressive symptoms seem to increase the risk of stroke morbidity more often in women than in men (RR 1.29, 95% CI 1.07 – 1.34). Controlling for confounders, there was a 29% increased risk of stroke per 5 unit increase on the CES-D scale over time among women. A number of studies have examined the neurobiological origin of this association. Interestingly, MRI studies of depressed cases compared with non-depressed controls have found an increased prevalence of white matter hyperintensities or “silent stroke” in the depressed population (Paradiso, S., & Robinson, R. G., 1998).

In terms of depression after stroke, international primary studies report post-stroke depression (PSD) prevalence proportions ranging from 21 to 27 per cent. (Paolucci S et al., 1999; Burvill, P. W. et al., 1995; Morris, P. L., Robinson, R. G., & Raphael, B., 1990). Paolucci (1999) highlights that women were twice as likely to develop depression (OR 1.94, 95% CI 1.27 – 2.96). Of the PSD group in his study, 62 per cent were women and 38 per cent were men. These findings are paralleled by other international studies (Hackett, M. L., Anderson, C. S., & House, A. O., 2004; Ng, K. C., Chan, K. L., & Straughan, P. T., 1995; Andersen, G., Vestergaard, K., Ingemann-Nielsen, M., & Lauritzen, L., 1995). In a different study, women had a significantly increased risk of suicide following stroke (Schubert, D. S., Taylor, C., Lee, S., Mentari, A., & Tamaklo, W., 1992). In contrast, Burvill and Morris (1995) found no sex differences.

In a Baltimore study of 301 subjects, greater severity of depression was associated with greater impairment in daily activities and social functioning in men. Conversely, in women, greater severity of depression was associated with prior diagnosis of psychiatric disorder and cognitive impairment. These findings speak to the importance of noting differences between the sexes (Hahn, R. C., & Petitti, D. B., 1988).

To date, evidence for treatment regimens in PSD, such as antidepressants, psychostimulants, psychotherapy, and ECT has been inconclusive and contradictory. A large Cochrane review found no clear evidence of benefit (or harm) for using pharmacotherapy or psychotherapy to
achieve remission of depression after stroke although some depressive symptoms were improved (Devine, E. C., & Westlake, S. K., 1995). However, this study did not stratify their results by sex. More gender-specific research is needed to examine the effectiveness of psychotherapeutic interventions vis-a-vis preventing or reducing stroke in a depressed population, and similarly reducing depression in a post-stroke population.

**Barriers to Care for Depression in Women and Stroke**

Depression is thought to have a detrimental effect on stroke recovery through a number of mechanisms. First, the depressed woman may be less motivated to participate in stroke rehabilitation. Persistent fatigue and a lack of hope may compound the issue (Whooley, M. A., Avins, A. L., Miranda, J., & Browner, W. S., 1997). Cognitive impairment may also impede the recovery process. Ultimately, this non-adherence to treatment schedules leads to an increased mortality rate (Gupta, A., Pansari, K., & Shetty, H., 2002).

**Cancer**

**Background**

According to the Ontario Mortality Database lung cancer is the leading cause of cancer deaths and the fourth leading cause of mortality among Ontarian women. Breast cancer is the second most lethal, followed by colorectal cancer and then cancer of lymphoid, hematopoietic and related tissues. (Public Health, 2005).

**Results**

Our search identified three meta-analyses and two systematic reviews which met our inclusion criteria; however, all were rated “poor” on the quality assessment (McKenna, M. C., Zevon, M. A., Corn, B., & Rounds, J., 1999); (Dalton, S. O., Boesen, E. H., Ross, L., Schapiro, I. R., & Johansen, C., 2002); (McGee, R., Williams, S., & Elwood, M., 1994); (van’t, Spijker A., Trijsburg, R. W., & Duivenvoorden, H. J., 1997). Two primary studies from the United States, of “good” and “fair” quality, also met our inclusion criteria (Table 16.2).

The literature exploring depression as a sequela to cancer is rich in primary sources and reviews. Despite this, studies that stratify by sex are sparse. The few studies that do exist generally report no gender differences in the prevalence of depression among cancer patients (Miaskowski, C., 2004). An American narrative review by Newport and Nemeroff (1998) examined studies in which the prevalence of depression in cancer patients ranged from 1.5 to 50 per cent. In a primary article from the United States by Ell and colleagues (2005), depression among low-income, ethnic women with breast or gynecologic cancer was assessed. They found that 24 per cent of the 472 women being studied reported moderate to severe depression. Sadly, only 12 per cent of the women meeting criteria for MDD reported receiving medication for depression, and only five per cent of women reported seeing a counsellor or participating in a cancer support group (Ell, K. et al., 2005). In this group of women, where effective treatment may have the largest impact on quality of life, the proportion of those under-treated is higher than women in the general population.
Treatments for Depression among Women and Cancer

In terms of evidence-based treatments, a comprehensive meta-analysis of 116 studies in the United States (which failed to stratify their results by sex) advocates for the institution of psychoeducational interventions for cancer patients. Specifically, in 92 per cent of the studies measuring depression, a positive treatment effect existed (van, Ede L., Yzermans, C. J., & Brouwer, H. J., 1999). A narrative review by Schwartz and others (2002) underscores the importance of individualizing treatment. Psychotherapy, antidepressants, psychostimulants and electroconvulsive therapy in resistant depression have all shown favourable outcomes when used in the appropriate patient. Cancer patients may tend towards normalizing or somatizing their emotional concerns. Thus, depression in this group is far too frequently underdiagnosed and under-treated. A Canadian systematic review by Sellick and Crooks (Sellick, S. M., & Crooks, D. L., 1999) suggests specific interventions to guard against cancer patients “falling through the cracks” of our health-care system. First and foremost, two general screening questions, “Over the past two weeks have you felt down, depressed, or hopeless?” and “Over the past two weeks have you felt little interest or pleasure in doing things?” should be instituted at every new patient visit. Second, all new cancer patients should be given a listing of mental health services available at the cancer centre or in the community. Third, screen individuals most at risk for depression; specifically, women, single people, homemakers, individuals of lower socio-economic status, younger patients, ethnic patients, patients with a history of psychiatric illness, substance abuse, physical impairment, medical illness or advanced stage disease and reassess mental status at every visit. Fourth, refer any high-risk patient to have a full assessment by a mental health professional. Fifth, cancer clinics should all have a set of trained mental health professionals who have oncology experience. Health-care professionals are much more apt to pick up subtle distress cues from a cancer patient than a generally trained mental health professional. Seventh, a variety of counseling techniques should be available to the patient including individual therapy, family counseling, and group therapy. Antidepressant medication should be used when indicated. Last, it is imperative that a multidisciplinary team meet regularly to ensure quality and continuity of care for all cancer patients (Sellick, S. M. & Crooks, D. L., 1999).

Ell and colleagues (2005) listed the principle perceived barriers to care among low-income, ethnic women with breast or gynecologic cancer and depression. Sixty-nine per cent of women were concerned about side effects of illness treatment or medication, 62% were concerned with the treatment process, and 39% of women reported a lack of understanding of what to expect when getting depression treatment. Forty-two per cent of the women were concerned with lost wages as a result of sick time and/or keeping medical appointments (Ell, K. et al., 2005).

In a narrative review by Ryan and others (2005), the authors examined barriers to treatment for cancer patients at the clinician level. Barriers which are due, in part, to the inadequacies of health-care providers. The once common notion that depression is inevitable in cancer patients and thus nothing can be done is out-dated and unacceptable. Attitudes such as these among health-care providers function only to invalidate the woman’s illness experience. Depression can have profound and far-reaching implications for cancer patients where adherence to stringent treatment regimens is challenging even for the most optimistic patients (Sellick, S. M., & Crooks, D. L., 1999). The review proposes the implementation of communication training programmes for oncologists and affiliated professionals. These learning opportunities could, in theory, enhance clinicians’ interpersonal skills, and train them to recognize and act on the
non-verbal and emotional cues of their cancer patients (Ryan, H. et al., 2005). Ryan et al. (2005) suggests that a patient-centred consulting style in conjunction with standardized screening questionnaires can aid in the detection of psychological distress in cancer patients.

**Respiratory Illness**

**Background**

In Ontario women, respiratory conditions such as asthma, chronic bronchitis, emphysema and pneumonia represent the sixth leading cause of death from a major disease while in Canada they are the fifth leading cause of death from a major disease (Public Health, 2005; Bourbonnais, R. & Mondor, M., 2001). Lacasse and others (1999) have reported on the epidemiology of chronic obstructive pulmonary disease (COPD) in Canada from 1980 to 1995. They concluded that the mortality rate among women with COPD increased by 241 per cent during this period. Age standardized mortality among men remained stable, while in women it increased from 8.3 per 100,000 in 1980 to 17.3 per 100,000 by 1995 (Isoaho, R., Keistinen, T., Laippala, P., & Kivela, S. L., 1995).

**Results**

Our searches identified one “poor” meta-analysis (Yohannes, A. M., Baldwin, R. C., & Connolly, M. J., 2000) and one “good” systematic review (van, Ede L., Yzermans, C. J., & Brouwer, H. J., 1999) (Table 16.1) that met our inclusion criteria; however, neither included analysis focused on women or sex differences. There are no Ontario studies pertaining to women with depression and respiratory illness.

The systematic review reports point prevalence proportions of significant depressive disorders from six to 42 per cent in COPD outpatients (van, Ede L., Yzermans, C. J., & Brouwer, H. J., 1999). However, the review also highlights the lack of methodologically sound primary sources examining COPD and depression. Although 69 studies were reviewed for inclusion, only 4 studies since 1967 were rated as “good” quality, an indication of a large knowledge gap for a common and debilitating problem.

**Risk Factors for Depression among Women and Respiratory Illnesses**

Two studies within the review conclude that elderly women with COPD are at greater risk for developing severe depression than older men. It is postulated that women, who traditionally are the homemaker and primary care giver, experience a greater role loss in the family (Yohannes, A. M., Baldwin, R. C., & Connolly, M. J., 2000). Other risk factors for depression following COPD include age, lower socio-economic status, the degree of hypoxia and level of physical impairment including the use of home oxygen, which is restrictive both in and out of the home.

**Barriers to Care for Depression in Women and Respiratory Illnesses**

Yohannes and others (2000) offer reasons why such a significant problem is so often under-diagnosed and untreated. First, COPD exacerbations and hospitalizations are common. As this change of lifestyle becomes “accepted” by many patients, they may not disclose depressive
symptoms unless they are specifically asked. Increased dependence on medical care and personal support at home may disempower the individual. This disempowerment may further exacerbate depressive symptoms. Conversely, the individual may irrationally avoid all social activities for fear of worsening their symptoms which may lead to social isolation and loneliness.

The Canadian Thoracic Society guidelines recommend pulmonary rehabilitation (exercise training and disease education) for every stable COPD patient in Canada. Pulmonary rehabilitation has been shown to enhance quality of life and improve independence in a number of studies (O’Donnell, D. E. et al., 2003); however, very few studies have reported even a small improvement in depressive symptoms. Gender analyses are non-existent.

**DIABETES**

**BACKGROUND**

In 2001, diabetes was the seventh leading cause of death from a major disease in women in Canada and Ontario (Public Health, 2005; Bourbonnais, R., & Mondor, M., 2001). The age-standardized prevalence of diabetes in Ontarian women was five per cent in the year 2000. It is likely much higher today (Ontario Ministry of Health and Long-Term Care, 2002).

**RESULTS**

Since 1990, there were three meta-analyses and one systematic review examining the interplay of depression and diabetes that met our inclusion criteria. Two meta-analyses were assessed as having “fair” quality, one was rated as having “good” quality and the systematic review was rated as “poor” (Gavard, J. A., Lustman, P. J., & Clouse, R. E., 1993) (See Table 16.1).

Anderson (2001) looked exclusively at the prevalence of depression comorbidity among those who were diabetic. They report the prevalence of depression in diabetic women at 28 per cent, compared to 18 per cent in diabetic men and 16% in non-diabetic women, based on the 16 studies they included in their review (Table 16.3).

Lustman et al. (2000) found that depression is associated with poorer glycemic control than that in non-depressed people, and that an improvement in depressed symptoms correlates with improved glycemic control and vice versa. Finally, De Groot and others (2001) concluded that depression increases the severity of both microvascular and macrovascular diabetic complications.

**BARRIERS TO CARE FOR DEPRESSION IN WOMEN AND DIABETES**

We know from non-gender specific studies that depression may be linked to both the onset and prognosis of diabetes (Lustman, P. J. et al., 2000). Moreover, depression is related to poorer blood glucose control. Women likely experience greater barriers in accessing treatment such as diabetes education centres, and may have barriers to diabetes self-management due to vegetative depression symptoms and familial role obligations (Thorpe, L., Whitney, D. K., Kutcher, S. P., & Kennedy, S. H., 2001).
Musculoskeletal disorders include osteoarthritis, osteoporosis, rheumatoid arthritis, fibromyalgia and chronic back pain; and are the leading cause of morbidity and disability in Ontario and Canadian women. Musculoskeletal disorders have the third largest impact on health-adjusted life expectancy (after cancer and heart disease), largely due to physical disability (Statistics Canada, 2002; Ontario Ministry of Health, 1990). Epidemiological, clinical and experimental studies consistently find that chronic pain syndromes, many of which are caused by musculoskeletal disorders, are more common in women than men, and the burden of pain is greater for women (Meana, M., Cho, R., & DesMeules, M., 2002; Unruh, A. M., 1996).

Experts agree that depression is highly prevalent among persons with chronic pain, and is generally under-treated (Dersh, J, Polatin, P. B., & Gatchel, R. J., 2002; Fishbain, D., Cutler, R., Rosomoff, H., & Rosomoff, R., 1997; Unruh, A. M., 1996; Sullivan, M., Reesor, K., Mikail, D., & Fisher, R., 1992).

Results

Our search identified two Canadian primary studies that were rated as having “good” quality (Table 16.2). There were no meta-analyses or systematic reviews that met the inclusion criteria and other studies were excluded for not stratifying their results by sex.

In an excellent primary article by Currie and Wang (2004), data from the CCHS is examined. Their study included 118,533 Canadians. The prevalence of depression as assessed by the Composite International Diagnostic Interview – Short Form for Major Depression (CIDI – SFMD) was 5.9 per cent for pain-free individuals and 19.8 per cent in people with chronic back pain. Furthermore, 1.8 per cent of the Canadian population suffers with depression and chronic musculoskeletal pain. Compared to non-depressed individuals with back pain, persons

<table>
<thead>
<tr>
<th>Grouping of studies</th>
<th>Controlled studies</th>
<th>Diabetic subjects: uncontrolled studies</th>
<th>Diabetic subjects: controlled + uncontrolled studies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nondiabetic subjects</td>
<td>Diabetic subjects</td>
<td></td>
</tr>
<tr>
<td>All studies</td>
<td>11.4 (18)</td>
<td>20.5 (18)*</td>
<td>29.7 (21)</td>
</tr>
<tr>
<td>Type 1</td>
<td>8.6 (3)</td>
<td>21.7 (3)*</td>
<td>21.2 (10)</td>
</tr>
<tr>
<td>Type 2</td>
<td>6.4 (7)</td>
<td>16.5 (7)*</td>
<td>33.8 (8)</td>
</tr>
<tr>
<td>Male</td>
<td>9.3 (7)</td>
<td>15.0 (7)*</td>
<td>20.7 (8)</td>
</tr>
<tr>
<td>Female</td>
<td>16.3 (7)</td>
<td>24.3 (7)*</td>
<td>33.0 (8)</td>
</tr>
<tr>
<td>Community</td>
<td>12.7 (11)</td>
<td>19.0 (11)*</td>
<td>39.7 (1)</td>
</tr>
<tr>
<td>Clinic</td>
<td>15.1 (7)</td>
<td>26.7 (7)*</td>
<td>32.7 (19)</td>
</tr>
<tr>
<td>Diagnostic interview</td>
<td>5.0 (7)</td>
<td>9.0 (7)*</td>
<td>14.2 (7)</td>
</tr>
<tr>
<td>Self-report</td>
<td>14.4 (11)</td>
<td>26.1 (11)*</td>
<td>34.9 (14)</td>
</tr>
</tbody>
</table>

Data are % (n); n indicates number of studies used in the calculation. * The prevalence of depression was greater in diabetic subjects compared with nondiabetic control subjects (P < .001); the prevalence of depression in diabetic individuals was greater in uncontrolled studies compared with controlled studies (P < 0.05).
with chronic back pain and major depression were more likely to be female (64.8% versus 54.6%) (Currie, S. & Wang, J., 2004). Meana's study (2002) also used the CCHS data and found the prevalence of depression among those with chronic pain was twice the prevalence among those without chronic pain. The prevalence of chronic pain and depression was higher in women than men across all age groups (32.5% versus 22% for those less than 65 years old, and 17.5% versus 13% for those greater than 65) (Table 16.4). In both of these studies, the combination of depression and chronic back pain was associated with lower socio-economic status (reduced income potential), greater disability, less social support, and higher utilization of health-care services than having either condition alone (Currie, S. & Wang, J., 2004; Meana, M., Cho, R., & DesMeules, M., 2002).

Meana et al. (2002) outlines the literature gaps well. First, there is a lack of detailed Canadian data on the types of chronic pain that women experience. Second, there is a paucity of systematic reviews and meta-analyses of Canadian data on chronic pain and depression in women. Third, there is a gap in the assessment of the functional impact of chronic pain on women's roles both at work and in the home. In addition, more gender-specific, quality research is needed to explore the efficacy of psychopharmacology and psychotherapy interventions in the setting of chronic pain.

**Barriers to Care for Depression in Women and Musculoskeletal Disorders**

Numerous studies have indicated that multidisciplinary treatment regimens for chronic pain patients offer improved outcomes than traditional care (Meana, M., Cho, R., & DesMeules, M., 2002; Geerlings, S., Twisk, J., Beekman, A., Deeg, D., & van Tilburg, W., 2002; Sullivan, M., Reesor, K., Mikail, D., & Fisher, R., 1992). Despite the evidence, only a minority of people receive care in multidisciplinary pain clinics. The vast majority of patients living with pain make frequent primary care visits, multiple consultations, and have an overall lack of continuity of care as they search for a quick solution to the problem. This detrimental pattern of health-seeking behaviour results in drug dependence for the patient, and major costs to the health-care system (Meana, M., Cho, R., & DesMeules, M., 2002). Meana and others (2002) delineate recommendations for improved care in the area of depression and chronic pain in women. First, they write, early detection and periodic surveillance of pain in a primary care setting is central. Chronic pain patients may be reluctant to speak openly about emotional concerns with health care providers, making standardized questions essential (Sullivan, M., Reesor, K., Mikail, D., & Fisher, R., 1992). Second, patient education is extremely important as it may help to dispel myths about a “cure” for the pain, giving more realistic expectations to the patient. This may, in turn, reduce multiple specialist consultations. Third, evidence indicates that multidisciplinary pain clinics improve the health and well-being of patients (Meana, M., Cho, R., & DesMeules, M., 2002; Geerlings, S., Twisk, J., Beekman, A., Deeg, D., & van Tilburg, W., 2002). These clinics have often been deemed too expensive to create to be economically viable. Meana and others (2002) challenge the status quo and suggests that smaller, community based pain clinics are, in the long-run, fiscally sound options. This type of clinic would, in theory, be accessible to a greater proportion of Ontario women than large metropolitan centres.

A Canadian narrative review by Unruh (1996) suggests that female patients are more likely to have their pain symptoms characterized as psychosomatic or psychogenic by the physician due
to an overarching belief that women have more complaints due to emotional factors. When clinical depression plays a role in the woman’s illness, she may be reluctant to take prescribed antidepressants for fear that this will perpetuate the belief that her pain is “in her head” (Sullivan, M., Reesor, K., Mikail, D., & Fisher, R., 1992).

**Conclusion**

Depression appears to be more prevalent among women suffering from leading chronic conditions. This depression not only has negative prognostic effects, but also detrimentally affects quality of life. Untreated depression in the setting of medical illness is associated with decreased adherence to medical care, lengthened hospital stays and increased mortality and morbidity (Newport, D. J., & Nemeroff, C. B., 1998). Younger women with physical illness, in general, tend to have higher rates of depression than older women (Meana, M., Cho, R., & DesMeules, M., 2002; Geerlings, S., Twisk, J., Beekman, A., Deeg, D., & van Tilburg, W., 2002). Older women are more experienced with chronic conditions and thus have lower expectations about functional status than younger subjects (Geerlings, S., Twisk, J., Beekman, A., Deeg, D., & van Tilburg, W., 2002). Moreover, younger women may face greater stress associated with the uncertain future of those suffering prematurely with chronic illness (Mazure, C. M., Keita, G. P., & Blehar, M. C., 2002). While the mechanisms linking depression with each condition reviewed are generally unknown, likely physiological, behavioural and psychosocial factors are at play. Depression among women with chronic conditions is grossly under-treated. This appears be due to the fact that neurovegetative or somatic symptoms cloud the diagnosis of depression in all chronic illness categories. In fact, somatic and vegetative problems represent five of the nine criteria within the DSM-IV diagnosis of major depression (Gordon, W. A. & Hibbard,
Physicians may be uncomfortable delving into the psychological issues of a patient, and may not know how to use screening tools appropriately.

**Knowledge Gaps**

- More large, prospective, epidemiologic trials need to be conducted to measure health-risk behaviour and pathophysiologic pathways in women to better understand the mechanisms by which depression increases the risk of medical illness and vice versa.
- Large, prospective studies in women with chronic illness are needed to improve our understanding of the reciprocal effects between depression and medical illness.

**Implications for Policy-makers and Health-Care Providers**

- Information on the geographical distribution of a particular disease or physical illness and the co-occurrence of depression in women in Ontario is needed to ensure access and availability of mental health services.
- As the connection between depression and physical illness is likely biopsychosocial in origin, collaborative, multidisciplinary care models are essential.
- Validated screening instruments should be used in settings where depression treatment has been proven to improve prognosis.
- Research endeavours, public education, increased access for women to specialty clinics and rehabilitation programs and implementing evidence-based collaborative care models, where appropriate, into our health-care system, are fundamental to effecting change in the health of Ontario women.
- Depressed women with comorbid physical illness need to be educated on the type, availability, and access of mental health services across Ontario, in both rural and urban settings.
### Table 16.5: Characteristics of Included Review Articles – Comorbid Physical Illness

<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Type</th>
<th>Age, yrs Range, Mean</th>
<th># of Studies</th>
<th>Description of Estimate</th>
<th>Mean, Min-Max</th>
<th>Conclusion</th>
<th>Overall Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heart Disease</strong></td>
<td></td>
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<tr>
<td>Van Melle, JP 2004, Netherlands</td>
<td>Meta-Analysis</td>
<td>54–65, 61 Prospective Cohort-22</td>
<td></td>
<td>Odds ratio of mortality in depressed patients following myocardial infarction</td>
<td>2.0, NR-NR</td>
<td>Impaired cardiovascular prognosis and post-myocardial infarction depression are consistently associated</td>
<td>Good</td>
</tr>
<tr>
<td>Wulsin, LR 2003, US CHD</td>
<td>Meta-Analysis</td>
<td>≥40, NR Prospective Cohort-10</td>
<td></td>
<td>Relative risk of depression leading to the onset of coronary disease</td>
<td>1.6, 1.0-3.5</td>
<td>Depression contributes a significant independent risk for the development of coronary disease</td>
<td>Good</td>
</tr>
<tr>
<td>Barth, J 2004, Germany</td>
<td>Meta-Analysis</td>
<td>54–74, NR Prospective Cohort-29</td>
<td></td>
<td>Odds ratio of depressive symptoms on mortality</td>
<td>2.2, NR-NR</td>
<td>Depression has an unfavourable effect on mortality in coronary heart disease patients</td>
<td>Fair</td>
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<tr>
<td><strong>Diabetes</strong></td>
<td></td>
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<tr>
<td>Anderson, RJ 2001, US</td>
<td>Meta-Analysis</td>
<td>20–74, NR Controlled-20 Not Controlled-19</td>
<td></td>
<td>Prevalence of depression in women with diabetes</td>
<td>28%, NR-NR</td>
<td>Diabetes doubles the odds of comorbid depression</td>
<td>Good</td>
</tr>
<tr>
<td>de Groot, M 2001, US</td>
<td>Meta-Analysis</td>
<td>≥18, NR NR-27</td>
<td></td>
<td>Rate of depression and diabetes complications</td>
<td>0.3, NR-NR</td>
<td>Diabetes complications and depression are significantly and consistently associated</td>
<td>Fair</td>
</tr>
<tr>
<td>Lustman, PJ 2000, US</td>
<td>Meta-Analysis</td>
<td>≥18, NR Cross-Sectional-26 RCT-4</td>
<td></td>
<td>Rate of depression on diabetes</td>
<td>0.2, NR-NR</td>
<td>Depression and hyperglycemia are associated</td>
<td>Fair</td>
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<tr>
<td><strong>Respiratory Illness</strong></td>
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<tr>
<td>Van Ede, L 1999, Netherlands</td>
<td>Systematic Review</td>
<td>61–75, NR Case-Control-4 NR-6</td>
<td></td>
<td>Prevalence of depression in patients</td>
<td>NR, 6-42%</td>
<td>Chronic obstructive pulmonary disease and depression are associated</td>
<td>Good</td>
</tr>
</tbody>
</table>

**Abbreviations:** NR – Not Reported  
RCT – Randomized Controlled Trial
### Table 16.6: Characteristics of Included Primary Articles – Comorbid Physical Illness

<table>
<thead>
<tr>
<th>Author Year, Country</th>
<th>Study Sample Recruitment, Instruments</th>
<th>Age, yrs Range, Mean</th>
<th>Sample Size</th>
<th>Definition of Depression</th>
<th>Prevalence (%)</th>
<th>Other Results</th>
<th>Quality Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heart Disease</strong></td>
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<tr>
<td>Grace, SL 2005, Canada</td>
<td>Prospective Cohort: Coronary Care Unit Patients</td>
<td>31–93, 62</td>
<td>323</td>
<td>BDI</td>
<td>31.3-Point prevalence of patients with elevated depressive symptomatology at baseline</td>
<td>Good 2005, Canada Coronary Care Unit Patients</td>
<td>21.7-Point prevalence of patients with elevated depressive symptomatology at one-year follow-up</td>
</tr>
<tr>
<td>Frasure-Smith, N 1999, Canada</td>
<td>Prospective Cohort: Hospitalized Post Myocardial Infarction Patients Montreal, Quebec</td>
<td>NR, 63</td>
<td>283</td>
<td>BDI</td>
<td>47.0-Point prevalence of depressive symptoms in female cardiac patients following admission to hospital with myocardial infarction</td>
<td>Good 1999, Canada Hospitalized Post Myocardial Infarction Patients Montreal, Quebec</td>
<td></td>
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<tr>
<td><strong>Stroke</strong></td>
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<tr>
<td>Wassertheil-Smoller, S 1996, US</td>
<td>Prospective Cohort: Ambulatory elderly clinical patients</td>
<td>≥60, 72</td>
<td>2,483</td>
<td>CES-D</td>
<td>14.9-Incidence of depression in women during five-year follow-up</td>
<td>Stroke morbidity in women Relative Risk (95% CI): 1.3 (1.1-1.3)</td>
<td>Good</td>
</tr>
<tr>
<td>Paolucci, S 1999, Italy</td>
<td>Prospective Cohort: Stroke Patients Rome, Italy</td>
<td>NR, 66</td>
<td>224</td>
<td>Hamilton</td>
<td>27.4-Prevalence of depression in stroke patients</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>Burvill, PW 1995, Australia</td>
<td>Prospective Cohort: Stroke Patients Perth</td>
<td>26–90, NR</td>
<td>294 Women and Men</td>
<td>PSE</td>
<td>14.0-Point prevalence of major depression in women following stroke 10.0-Point prevalence of minor depression in women following stroke</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>Morris, PL 1990, Australia</td>
<td>Prospective Cohort: Stroke Patients</td>
<td>39–90, 71</td>
<td>48</td>
<td>CIDI</td>
<td>20.9-Prevalence of depression 15 months post-stroke 14.5-Prevalence of major depression 15 months post-stroke 6.3-Prevalence of minor depression 15 months post-stroke</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>Author Year, Country</td>
<td>Study Sample Recruitment, Instruments</td>
<td>Age, yrs Range, Mean Sample Size</td>
<td>Definition of Depression</td>
<td>Prevalence (%)</td>
<td>Other Results</td>
<td>Quality Rating</td>
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<tr>
<td><strong>Cancer</strong></td>
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<tr>
<td>Kroenke, CH 2005, US</td>
<td>Prospective Cohort: US Nurses</td>
<td>46–71, NR 81,612</td>
<td>MHI-5</td>
<td>8.0-Point prevalence of depressive symptoms</td>
<td>Development of colorectal cancer in women with depressive symptoms Relative Risk (95% CI): 1.5 (1.0-2.2)</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>Ell, K 2005, US</td>
<td>Cross-sectional: Oncology Clinics</td>
<td>NR, 50 472</td>
<td>PHQ-9; PRIME-MD</td>
<td>24.0-Prevalence of moderate to severe depressive disorders in female breast and gynecological patients</td>
<td></td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td><strong>Musculoskeletal Disorders</strong></td>
<td></td>
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<td>Gagnon, LM 2002, Canada</td>
<td>Cross-sectional: Population-based Calgary, Alberta</td>
<td>NR 2542</td>
<td>CIDI-SFMD</td>
<td>NR</td>
<td>Major depressive syndrome in women with and without long-term medical conditions Ratio (95% CI): 1.3 (1.1-1.7)</td>
<td>Good</td>
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<td>Magni, G 1993, US</td>
<td>Prospective Cohort: Population-based NHANES-1; NHEFS</td>
<td>32–86, 54 1,335</td>
<td>CES-D</td>
<td>NR</td>
<td>Major depression in individuals with chronic musculoskeletal pain Odds Ratio (95% CI): 3.3 (2.4-4.4)</td>
<td>Fair</td>
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Abbreviations:  
BDI – Beck Depression Inventory  
CCHS – Canadian Community Health Survey  
CES-D – Centre for Epidemiologic Studies – Depression Scale  
CI – Confidence Intervals  
CIDI-SFMD – Composite International Diagnostic Interview (-Short Form Major Depression)  
Hamilton – Hamilton Rating Scale  
MHI-5 – 5 Question Mental Health Index  
NHANES-1 - National Health and Nutrition Examination Survey  
NHEFS – National Health and Nutrition Epidemiologic Follow-Up Study  
NPHS – National Population Health Survey  
PHQ-9 – Patient Health Questionnaire  
PRIME-MD – Primary Care Evaluation of Mental Disorders, Pfizer, NY  
PSE – Present State Exam
PART FOUR: TREATMENT AND BARRIERS TO CARE
CHAPTER 17: CURRENT TREATMENTS

DIANE K. WHITNEY

SCREENING AND TREATMENT

For depression to be treated appropriately, depression must first be recognized and then treated with evidence-based pharmacotherapy and psychotherapy. Only 43 per cent of those who met the criteria for major depressive episodes in the previous year’s report talking to a health care professional about their emotional problems and 75 per cent of those individuals who received treatment were below the minimum four visits deemed necessary for acute treatment (Diverty, B., & Beaudet, M. P., 1997). The Clinical Guidelines for The Treatment of Depressive Disorders outline current evidence-based recommendations for treatment of depression and this document highlights gender specific recommendations (Thorpe, L., Whitney, D. K., Kutcher, S. P., & Kennedy, S. H., 2001). However the translation of these guidelines into actual clinical care by Canadian psychiatrists and family physicians remains a challenge.

The first challenge is to identify those experiencing depression, which raises the question of the effectiveness of screening in the general population and primary care. The Canadian Task Force on Preventive Health Care (CTFPHC) concluded that there is “fair” evidence to recommend screening adults for depression in primary care settings since screening improves health outcomes when linked to effective follow-up and treatment (MacMillan, H. L. et al., 2005). However there is insufficient evidence to recommend for or against screening adults in primary care settings where effective follow-up and treatment are not available. In these studies “effective follow-up and treatment” referred to screening programs that integrated feedback to the clinician regarding depression status, as well as a system for managing medications and psychotherapeutic interventions. Unfortunately such integrated systems in primary care are not found throughout the province of Ontario.


PSYCHO THERAPY FOR WOMEN

With regards to psychotherapy, women are considered to do better with problem-solving and group therapy. The evidence is strongest for women doing better with Interpersonal Psychotherapy (IPT) (Pajer, K., 1995). There is also evidence that IPT plus antidepressant therapy can be an effective treatment for recurrent depression (Frank, E. et al., 2000). In addition,
studies show that women and men have similar outcomes when treated with Cognitive Behavioural Therapy except for one study where the severely depressed women were less likely to achieve remission than men (Thase, M. E., Reynolds, C. F., Frank, E., & Simons, A. D., 1994).

**Pharmacokinetics**

Gender differences in pharmacokinetics and pharmacodynamics of psychotropic medications may be related to the effects of female hormones, lean/adipose body mass, differences in hepatic blood flow and hormone effects (Yonkers, K. A., Kando, J., Cole, J. O., & Blumenthal, S., 1992). Women are more likely to have higher plasma levels of antidepressants, more side effects and more frequent drug toxicity compared with men (Kornstein, S. G., 1997). There is some controversial evidence that women may respond better to selective serotonin reuptake inhibitors (SSRIs) while men may respond better to tricyclic antidepressants (TCAs) (Kornstein, S. G. et al., 2000; Raskin, A., 1974). Some authors have noted that the superiority of SSRIs is seen in premenopausal women only (Mazure, C. M., Keita, G. P., & Blehar, M. C., 2002).

Alternative treatments, by alternative medical professionals, are being commonly used by patients to treat depression. Women (especially white, middle aged women) are likely to be users of unconventional therapies (Tesch, B. J., 2003). Having more than 12 years education and one or more long term medical condition was also associated with increased likelihood of using alternative medicine by individuals with major depression (Wang, J., & El-Guebaly, N., 2004). St John's Wort has been demonstrated to be efficacious for mild to moderate depression with fewer side effects than conventional antidepressants (Lecrubier, Y., Clerc, G., Didi, R., & Kieser, M., 2002). However, concerns exist about interactions with several conventional drugs such as anticoagulants, oral contraceptives and antiviral agents as well as SSRIs leading to serotonin syndrome (Ernst, E., 2002). The Cochrane Review for acupuncture for depression concluded that there was insufficient evidence to determine the efficacy of acupuncture compared to those who received conventional medication, sham acupuncture or the controls who remained on the wait list (Smith, C. A., & Hay, P. P., 2005).

**Issues to Consider with Regards to Providing Treatment and Therapy for Depressed Women**

When considering the type of treatment in women with depression, co-existing psychiatric conditions must be considered during assessment and treatment planning. Anxiety disorders commonly occur with depression and the female to male ratio is reported as 3:1. When depression and anxiety occur together there is increased symptom severity, chronicity and greater functional impairment. There is also a decreased response to antidepressant monotherapy and higher incidence of suicide. Thus, treatment is more likely to be complex and require specialized care.

For women experiencing comorbid mood disorders and post-traumatic stress, the concept of PTSD needs to be considered. Women have typically experienced repeated childhood physical, psychological and/or sexual abuse and this has impacted their psychological development, affect regulation and ability to form relationships (Hermann N., Black SE, Lawrence J, Szekely C, & Szalai JP, 1998). The appropriate treatment for PTSD and depression is usually staged into early, middle and late phases (Courtois, C. A., 1999). The initial focus of treatment is on self-care and safety techniques, symptom control (both depression & trauma i.e. flashbacks, hyperarousal, nightmares) as well as acknowledging the connection between current symptoms and past trauma (i.e. triggers for flashbacks, beliefs arising from the trauma). This initial stage
of trauma and depression treatment may take months to years to complete. The in-depth trauma exploration that follows in the middle stage does not occur until initial stages are completed and the patient is well stabilized. Unfortunately, many clinical programs and individual counselors lack the skill and expertise to deal with comorbid depression and trauma.

Women are more likely to be diagnosed with depression and men with substance use disorders. However, there are a significant number of women who present with comorbid depression and substance abuse and these women are a particular challenge for treatment. For the majority of women with depression and substance use disorders, depression is the “primary” disorder and women use substances to modulate the effect of negative mood (Mazure, C. M., Keita, G. P., & Blehar, M. C., 2002). Since the majority of clinical trials in the past excluded individuals with comorbid substance abuse disorders there is little evidence to inform treatment and even less evidence to inform approaches to depression in these women. Recent “Best Practices Concurrent Mental Health & Substance Use Disorders” from Health Canada provide a treatment/management approach from an individual to systemic approach (Health Canada, 2001).

The most recent Canadian treatment guidelines (2001) from the Canadian Psychiatric Association and Canadian Network for Mood and Anxiety Treatments are available at http://www.cpa-apc.org/Publications/Clinical_Guidelines/depression/clinicalGuidelinesDepression.asp. Recent updates to the guidelines are available to members only from the Canadian Psychiatric Association website (http://www.cpa-apc.org/).
CHAPTER 18: ACCESS TO SERVICES/TREATMENT

DIANE K. WHITNEY

The most significant challenge is the translation of clinical practice guidelines and best practices into actual provision of mental health care. With Ontario’s population spread across a large geographic area and its associated regional diversity, it is difficult to suggest that one solution will be appropriate for all locations and/or all settings. It is important to examine the various aspects, both barriers and opportunities that exist across Ontario at this time. With an additional focus on women, another layer of complexity is added.

In understanding the current situation with mental health issues for women, Ontario specific data must be examined. One source of Ontario specific data are studies utilizing the Ontario Health Survey - Mental Health Supplement (Offord, D. R. et al., 1996). The Mental Health Supplement (OHS-MHS) was a community survey conducted between November 1990 to March 1991 that collected information regarding mental health disorders as well as use of medical and mental health services utilization. The provincial rate of mental disorders for OMGHS respondents between 15 and 64 years of age was 19.5 per cent. This study also explored differences in age and sex with respect to mental health-related OHIP billings. For both sexes, the per capita spending was higher for those aged 20 to 64 years than for adolescents and those older than 65 years. Per capita spending for women was greater than men across all age groups, with the largest sex differences occurring in the 20 to 44 and 45 to 64 year age group (Lingham, R. & Scott, J., 2002). Mental health-related OHIP billings increased steadily as a proportion of total OHIP expenditures from 1992 to 1995. There was also considerable regional variation in per capita OHIP billings for mental health care with the lowest being in the North, and the highest in the Central West to Central East. This regional variation is most accounted for by reimbursements to psychiatrists. It should be noted that this data is for all mental health illnesses and not just depression.

Another Ontario study investigated the characteristics of service users compared to non-users of mental health services (Lin, E., Goering, P., Offord, D. R., Campbell, D., & Boyle, M. H., 1996). Mental health services were used by 7.8 per cent of the respondents to the Mental Health Supplement of the Ontario Mental Health Survey. Of these respondents, 57.8 per cent had a past year diagnosis of depression while 14.2 per cent had a previous diagnosis of depression. The strongest predictors of use of mental health services were being: female; separated, divorced or widowed; receiving public assistance and past year diagnosis of depression. Higher proportions of service seekers were also found among 25 to 44 years old and living in urban areas. Education, immigrant status and geographic region were not significant predictors of use.

Residents of Ontario have the option of accessing a variety of health-care providers including: family physicians, psychiatrists, psychologists, psychotherapists, social workers, counsellors etc. for mental health issues. A study in Canadian Psychology presented a profile of consumers of services by psychologists in 1994 – 95 (Reid, A. J. et al., 1998). Consumers were more likely to be female, middle-aged and separated, divorced or widowed. Those with higher education and higher income were more likely to receive psychological services. Consumers of psychological
services reported poorer physical health status, higher number of past and recent stressors, higher levels of distress and more likely to be using psychotropic medication. However, the majority meeting the criteria for depression did not receive psychological services. (Canadian Psychology) The study suggests there is an under-utilization of psychological services despite relatively high levels of mental health problems in the Canadian population. This study also comments that the public appears to be ill-informed about the nature of psychological services and routes to access these services. The lack of insurance coverage for psychological services for a significant segment of the Canadian population who tend to have the greatest health care needs likely contributes to the gap between population needs and service utilization. (Frackiewicz, E. J., Sramek, J. J., & Cutler, N. R., 2000)

Another study of Ontario residents with depression, compared untreated and treated respondents to not depressed respondents (Lin, E., & Parikh, S. V., 1999). The untreated depressed group had lower rates of concurrent physical illness, comorbid anxiety disorders, suicidal ideation, and suicide attempts and they were more likely to report single-episode depression and past-year onset. The depressed group showed significantly higher rates of six month disability and childhood risk factors (including parental psychopathology and childhood sexual or physical abuse). In addition, the treated depressed group was somewhat younger and more likely to be female, unmarried and suffering from economic deprivation. The most striking difference was that the untreated, depressed respondents were less likely to feel they had a mental health problem and less likely to say they would seek help for a problem or were comfortable consulting a professional.

The literature reports a higher rate of mental health service use observed among single-parent mothers. Cairney J et al. 2004 investigated possible reasons for this high service usage, including greater need (psychopathology) or other factors (pre-disposing and enabling characteristics). This study noted that differences in the prevalence of psychiatric disorders accounted for higher use of services among single mothers.

**Women’s Satisfaction/Dissatisfaction with the Mental-Health System**

The Kitchen Table Project explored women's experience with the mental-health system in South Western Ontario. The project wanted to explore effectiveness of services in South Western Ontario and the need for women-specific services. This study revealed that women moved through a variety of services before finding one with which they were satisfied. Ninety per cent of women indicated they were dissatisfied with their psychiatrist, identifying they were feeling un-supported, given too little time and the focus was mostly on medication. In addition 58% of women felt that they were not an active participant in their care. The women identified family physicians as the main support but the shortages of family physicians across Ontario created challenges. Women identified that they wanted a holistic approach, but this is lacking in the current mental health system.
BACKGROUND

Despite the high prevalence and significant burden of depression, epidemiological research has established that most people with depression in the general population receive no or inadequate treatment (Young, E. A., Midgley, A. R., Carlson, N. E., & Brown, M. B., 2000). Societal, family, consumer, clinician and system barriers are thought to account for this inconsistency, and conceptual frameworks such as the Illness Behaviour Model (Mechanic, D., 1962) and Behavioral Model of Health Service Use (Burvill, P. W. et al., 1995) have been developed in order to better understand barriers to seeking mental health care (Bruce, M. L., Wells, K. B., Miranda, J., Lewis, L., & Gonzalez, J. L., 2002).

In general, research on mental health service utilization reveals that adult women show better outcomes than men across a number of domains (Miranda, J. & Bruce, M. L., 2002; Lin, E. & Parikh, S. V., 1999). However, little research has examined the reasons for these sex differences or explicitly examined the barriers faced by women in accessing treatment for depression.

In this section, barriers to mental health care that have been established in research with the general population of men and women will be reviewed, together with the available literature regarding known or hypothesized sex differences in these barriers.

BARRIERS TO SEEKING MENTAL-HEALTH CARE

DEPRESSION OFTEN GOES UNRECOGNIZED

Literature suggests that approximately half of depressed patients in primary care settings are detected (Bruce, M. L., Wells, K. B., Miranda, J., Lewis, L., & Gonzalez, J. L., 2002). In the Commonwealth Fund 1998 Survey of Women’s Health, 42% of women with high self-reported depression scores were told by a doctor in the past five years that they had anxiety or depression; 55% of women who perceived that they needed mental health care were detected by their physicians (Sherbourne, C. D., Dwight-Johnson, M., & Klap, R., 2001). In this sample, 7.9 per cent of the total general population of women self-reported unmet need for mental health problems (Sherbourne, C. D., Dwight-Johnson, M., & Klap, R., 2001).

It has been suggested that lack of diagnosis and mis-diagnosis may be particularly problematic in women patients, particularly as a result of androcentric medical training and diagnostic systems which are developed primarily to detect symptoms of depression known to be common in men (Floyd, B. J., 1997). However, there is evidence that women are more likely than men to recognize symptoms of depression, more likely to have their primary care clinicians recognize their depression, and more willing to seek mental health care (Miranda, J., & Bruce, M. L., 2002).
Depression Treatment Seldom Conforms to Standards in Practice Guidelines

Research suggests that only 20 to 25 per cent of patients with depression in primary care, receive appropriate treatment; rates are somewhat higher but still less than optimal when care from mental health specialists are considered (Bruce, M. L., Wells, K. B., Miranda, J., Lewis, L., & Gonzalez, J. L., 2002). Women, like men, are more likely to receive mental health care from their primary care providers than from mental health specialists (Sherbourne, C. D., Dwight-Johnson, M., & Klap, R., 2001). Evidence suggests that women are more likely than men to receive guideline-consistent treatment for their depression (Williams, C. C., 2001). However, research is needed to evaluate whether standard practice guidelines for treatment of depression are equally effective in women as compared to men.

Poor Adherence with Antidepressant Medications/ Lack of Availability of Alternate Treatments

Patient adherence with antidepressant medications is typically moderate to poor (Simon, G. E. et al., 1999). Proposed reasons for poor adherence include stigma associated with depression, the belief that depression should not require medical treatment, and the beliefs that antidepressant medications are addictive or can be taken as needed (Demyttenaere K. et al., 2005). In some cases, non-adherence may occur because antidepressant medications are not the preferred form of treatment. Although some forms of psychotherapy have been established as effective treatments for depression (see Chapter 18), research has not yet been conducted to evaluate the availability and/or accessibility of psychotherapy for depressed patients (Bruce, M. L., Wells, K. B., Miranda, J., Lewis, L., & Gonzalez, J. L., 2002). Qualitative research, however, suggests that access to trained, locally available therapists may be limited (Miedema, B., Tatemichi, S., Thomas-Maclean, R., & Stoppard, J., 2004).

During pregnancy and lactation, depressed women may prefer psychotherapy over pharmacotherapy in order to minimize risk to the fetus/infant (Chabrol, B., Halluin-Roeland, V., Fayol-Buffat, L., & Mancini, J., 2004). Adherence may also be determined by side effects, and women may be more likely than men to find some side effects of antidepressant medications to be troublesome or persistent (Steele, L. S., Glazier, R. H., Lin, E., Austin, P. C., & Mustard, C. A., 2005; Miranda, J. & Green, B. L., 1999; Belle, D., 1990). Finally, due to the multiple demands on women's time, it may be difficult for them to comply with some treatment regimens (e.g., weekly psychotherapy) or to attend appointments due to a lack of access to childcare and transportation (Miranda, J., & Bruce, M. L., 2002).

Societal Stigma Associated with Depression

Negative expectations and attitudes towards people with mental illness are widely held and may influence an individual's willingness to seek treatment or to disclose symptoms to a healthcare provider (Sirey, J. A. et al., 2001). There is evidence that women are less likely than men to see mental health treatments as stigmatized (Miranda, J., & Bruce, M. L., 2002). It is possible that socialization of women as “emotional” and men as “stoic” results in greater social acceptability of seeking mental health care for women than men (Floyd, B. J., 1997). However, the Commonwealth Fund 1998 Survey of Women's Health found that 35 per cent of women with unmet need reported not seeking help due to feeling that one “can handle it myself” (Sherbourne, C. D., Dwight-Johnson, M., & Klap, R., 2001). Further, due to the importance
of interpersonal relationships and the economic reliance upon men faced by many women, women may be more likely to be influenced by negative perceptions of mental health care of others in their immediate circles than are men.

Societal stigma should also be considered in a broader context to include more limited insurance coverage for mental health illnesses, than general medical disorders, similar to in the U.S, where policies exclude individuals from life insurance, employment, or running for public office based on history of mental illness (Bruce, M. L., Wells, K. B., Miranda, J., Lewis, L., & Gonzalez, J. L., 2002). Such policies may act as significant deterrents to reporting symptoms of depression to a health-care provider. Similarly, some women may choose not to seek mental health care out of fear of losing custody of children.

**Lack of Insurance and Socio-economic Status**

Studies from the United States have consistently found lack of health insurance coverage to be a primary barrier to help-seeking (Bruce, M. L., Wells, K. B., Miranda, J., Lewis, L., & Gonzalez, J. L., 2002). In the Canadian context, most individuals have access to universal health insurance, although for some populations (e.g., non-status immigrants/refugees, homeless men and women without identification) lack of insurance is a significant barrier to appropriate mental health care. Further, the costs of psychotropic medications are not covered by the provincial health insurance plan (OHIP), although they are covered for individuals receiving social assistance, those over age 65 and those eligible for the Trillium Drug Plan. As a result, accessibility of these treatments for most women will depend on private insurance status or ability to pay out of pocket. Similarly, many mental health professionals who provide counselling or psychotherapy are not covered under OHIP (e.g., psychologists, social workers) unless they are accessed through hospitals or community agencies who employ salaried mental health professionals.

Neighbourhood poverty and lower levels of education are associated with reduced use of health services generally (Bruce, M. L., Wells, K. B., Miranda, J., Lewis, L., & Gonzalez, J. L., 2002) and services from mental health specialists specifically (Valiadis, H. M., Lesage, A., Adair, C., & Boyer, R., 2005; Belle, D., 1990). After controlling for education, individual income does not appear to be associated with use of specialty mental health services in both Canadian and American samples (Steele, L. S., Glazier, R. H., Lin, E., Austin, P. C., & Mustard, C. A., 2005; Alegria, M., Bijl, R. V., Lin, E., Walters, E. E., & Kessler, R. C., 2000).

Cost of treatment and lack of health insurance have been cited as barriers to mental health treatment by poor women in the United States. In the Commonwealth Fund 1998 Survey of Women's Health, having a college education was associated with having less unmet need than those with lower education levels (Sherbourne, C. D., Dwight-Johnson, M., & Klap, R., 2001). Due to women's greater likelihood of living in poverty and lower access to higher education than men, financial costs associated with mental health services may disproportionately act as a barrier for women.

**Lack of a Regular Primary Health-care Provider/Lack of Sufficient Time with Provider**

Individuals without an established relationship with a primary care clinician tend to receive lower rates of treatment for depression (Wells, K. B., Schoenbaum, M., Unutzer, J.,
Lagomasino, I. T., & Rubenstein, L. V., 1999). In the Commonwealth Fund 1998 Survey of Women's Health, having a regular doctor and usual place of care was associated with lower unmet need (Sherbourne, C. D., Dwight-Johnson, M., & Klap, R., 2001). The current shortage of family physicians in many areas of Ontario may therefore serve as a significant barrier to depression treatment for both men and women.

Studies have indicated that patients perceive the short duration of primary care consultations to be a barrier to adequate care for depression (Bruce, M. L., Wells, K. B., Miranda, J., Lewis, L., & Gonzalez, J. L., 2002). Some patients may perceive that the physician does not have time to discuss their mental health and therefore choose not to disclose symptoms (Floyd, B. J., 1997). Due to women's caregiving responsibilities, it may be difficult for them to return for a second appointment to follow-up on any mental health issues raised during a primary care consultation (Miranda, J., & Bruce, M. L., 2002).

**Barriers to Mental Health Care for Men and Women in Ontario**

In Cycle 1.2 of the Canadian Community Health Survey, respondents were queried about unmet needs and perceived barriers to mental health services. All respondents were asked whether there had been a time in the past 12 months when she/he needed help for their emotions, mental health, or use of alcohol or drugs but didn't receive it. Approximately 4.9 per cent of the total sample indicated unmet need for mental health care in the past year. In both the national sample and the Ontario sample, unmet health care needs were higher among women than among men (5.4% vs. 3.6% for Canada; 5.6 vs. 3.4% for Ontario). When unmet needs were examined by age, needs were greatest among 15 to 24 year-old women. Of this sample, 10.2 per cent reported unmet health care needs associated with mental health problems. Respondents who reported unmet needs were then asked about the reason(s) for not getting help. Three categories of barriers were queried:

**Barriers Due to Accessibility Issues**

These included not being able to access services due to cost, lack of transportation, or issues such as child care or scheduling. Accessibility barriers were more often reported by women than by men (0.7 vs. 0.4% of the total Canadian sample; 0.7 vs. 0.3% of the total Ontario sample). When only those respondents who reported unmet mental health need were considered, 12.9% of Ontario women reported barriers due to accessibility issues. This figure is slightly lower than the national rate of 13.5 per cent of women with unmet mental health need reporting barriers due to accessibility issues. When age was considered, respondents aged 15 to 24 years were most likely to endorse barriers due to acceptability issues (1.3% of all 15 to 24 year old Canadian women surveyed; 13.0 per cent of 15 to 24 year old Canadian women reporting unmet mental health need).

**Barriers Due to Acceptability Issues**

These included situations in which individuals chose to do without care either because of competing demands on their time, or because of their attitudes towards illness, health-care providers or the health-care system, e.g. decided not to bother, not getting around to it, personal or family responsibilities, preferred to manage it themselves, did think it could help, afraid to ask for help/afraid what others would think, or language problems. Acceptability barriers
were also reported more often by women than by men (4.1 vs. 2.7% of the total Canadian sample; 4.4 vs. 2.5% of the total Ontario sample). When only those respondents who reported unmet mental health need were considered, 79.4 per cent of Ontario women reported barriers due to acceptability issues. This figure is slightly higher than the national rate of 76.0 per cent of women with unmet mental health need reporting barriers due to acceptability issues. When age was considered, respondents aged 15 to 24 years were most likely to endorse barriers due to acceptability issues (8.7% of all 15-24 year old Canadian women surveyed; 85.0% of 15 to 24 year old Canadian women reporting unmet mental health need).

**Barriers Due to Availability Issues**

These included not being able to access services because of wait-times or help not being available in the area or at the time required. Availability barriers were also reported more often by women than by men (1.0 vs. 0.6% of the total Canadian sample; 0.8% of Ontario women; rates in Ontario men could not be reliably estimated). When only those respondents who reported unmet mental health need were considered, 15.1 per cent of Ontario women reported barriers due to availability issues. This figure is slightly lower than the national rate of 18.0 per cent of women with unmet mental health need reporting barriers due to availability issues. When age was considered, respondents aged 15 to 24 years were slightly more likely than other age groups to endorse barriers due to availability issues (1.2% of all 15 to 24 year old Canadian women surveyed; 12.0% of 15 to 24 year old Canadian women reporting unmet mental health need).

Several interesting findings from the CCHS data should be noted. First, data with respect to unmet mental health care needs are inconsistent with data from U.S.-based epidemiological surveys, in which unmet mental health-care needs have been reported to be greater among men than among women (Miranda, J., & Bruce, M. L., 2002). Reasons for this inconsistency cannot be determined on the basis of the available data, but may be related to the Canadian universal health care system.

Unmet mental health-care needs and each type of barrier to care were most frequently endorsed among 15-24 year olds. These findings are consistent with other research that has revealed elevated rates of unmet mental health-care needs and increased barriers to care among adolescents (Wittchen, H. U., & Jacobi, F., 2005).

Finally, of the three categories of barriers, acceptability barriers were substantially more frequently endorsed, with nearly 80% of those women with unmet mental health care needs reporting acceptability barriers. Acceptability barriers encompass some domains that could conceivably be more relevant to women than to men (e.g., personal and family responsibilities, competing demands on their time). Acceptability barriers may also reflect women's negative past experiences with accessing medical care, related to systematic problems such as androcentric medical training and a lack of respect towards women patients. Finally, acceptability barriers queried were all largely barriers at the individual- or interpersonal- (rather than system) level. This suggests that access to depression care in Ontario will best be addressed by interventions that target individual-level barriers, such as public education about the consequences and rates of treatment of depression.
Barriers to Mental health care in High-Risk Populations

Although reported rates of unmet mental health needs and barriers to mental health care in Ontario based on CCHS data are relatively low, research on general health-care utilization suggests that certain populations have elevated rates of unmet health-care needs, and face additional barriers to accessing mental health care. Several of these populations are thought to be at high-risk for depression, as described in Part Three.

This section will summarize the barriers to mental health care described above as they apply to populations of women thought to be at high-risk for depression, and will describe additional, unique barriers to mental health care for high-risk populations. More detailed description of barriers for each population, including references of original studies, are provided in Part Three.

Lack of Research Evidence for Best Practices with Respect to Screening, Prevention and Treatment of Depression among Sub-populations of Women

Adequate care for depression relies upon evidence-based best practice guidelines for screening, prevention and treatment. Although such guidelines exist for women in general (see Chapter 17), the lack of research evidence evaluating screening and treatment strategies, in particular within sub-populations of women, limits the extent to which guidelines will be applicable. For example, there are no adequately validated tools to screen for depression among adolescents, and few translated screening tools have been adequately validated for use in culturally diverse populations. Moreover, screening is presently recommended only where there are well-defined referral services and timely treatment facilities available, a condition that is not met in many parts of Ontario. Similarly, there are significant gaps in the research with respect to effective strategies for the treatment of several sub-populations of women, including adolescents, perinatal women, and older women.

Structural Issues Including Wait-times, Short Physician Visits, Physician Shortages

While structural issues may act as barriers to care for the general population, they may disproportionately affect high-risk sub-populations of women. For example, women with significant competing demands on their time (e.g., lone mothers, homeless women) may be particularly unable to tolerate wait-times in the mental health system. Similarly, typical short primary care consultations may not be sufficient to adequately address the complex health issues of depressed women who have experienced violence, are homeless, and women with comorbid physical illness. Finally, where there are physician shortages, doctors may be unwilling to care for depressed women where there is not adequate reimbursement (e.g., homeless women or non-status immigrants/refugees who do not have health cards; homeless women or women who have experienced violence who may require long consultations). Finally, reductions in coverage of universal health insurance plans (e.g., recent delisting of optometry services in Ontario) may particularly disadvantage sub-populations that tend to be economically insecure (e.g., homeless women, lone mothers).
Lack of Continuity of Care

Many members of high-risk populations, and particularly homeless women and recent immigrants, do not have a regular primary care physician. These and other high-risk women are more likely to access their health care through emergency services (e.g., hospital emergency departments or walk-in clinics). This can result in fragmented medical records and as such, a lack of continuity of care that will be detrimental to the overall quality of mental health care received.

Mistaken Belief that Distress is “normal” and Does Not Require Treatment

Populations designated as high-risk are often those currently facing or who have faced some sort of adversity, e.g., domestic violence, childhood abuse, homelessness, serious physical illness. As such, women themselves or their health-care providers may conceptualize their symptoms of depression as ‘normal’ and not pursue adequate treatment. Similarly, symptoms of depression and irritability in adolescents may be dismissed as not worthy of investigation or treatment.

Previous Negative Experiences with Health-Care Providers

Members of marginalized social groups, including LGBTT people, immigrants and refugees, members of ethnocultural minority groups, and homeless people, face social discrimination and often discriminatory treatment from health-care providers. Previous negative experiences with healthcare providers may dissuade marginalized and other women from accessing mental health services or disclosing symptoms of depression. Similarly, many mental health-care providers may have inadequate specific knowledge about the health care needs and social context of members of high-risk sub-populations, e.g., perinatal women, homeless women, LGBTT women, and as such, may provide suboptimal or inappropriate care. Finally, women who have experienced trauma (as adults or as children) may find it difficult within the available time constraints to establish a sufficiently trusting relationship with a health-care professional to allow for disclosure of depression symptoms.

Social Isolation and Lack of Knowledge about Available Supports

Socially marginalized women (e.g., homeless women, recent immigrants and refugees) often lack cohesive social support networks. Social support is an important predictor of both women’s need for mental health services and women’s ability to access services (Sherbourne, C. D., Dwight-Johnson, M., & Klap, R., 2001). Further, lack of formal and informal support networks may leave some high-risk women unaware of mental health services they could otherwise access, as has been reported for both homeless women and women who have experienced domestic violence.

Implications for Policy-Makers and Health-Care Providers

The above research has indicated relatively low rates of unmet mental health needs among Ontario women; however, additional studies are needed to validate this finding. Further, additional Ontario-based quantitative and qualitative research is needed to identify the extent to which unmet mental health need may vary among high-risk subpopulations (e.g., homeless
women, lone mothers, women who have experienced violence). Research is also needed to better understand the high rates of acceptability barriers to accessing mental health care, and to develop strategies to reduce the impact of these barriers.

High-risk women may be disproportionately affected by known barriers to accessing mental health care, and may also face some unique, additional barriers. The impact of these barriers is largely as a result of the socially marginalized and/or isolated status of many high-risk sub-populations (e.g., homeless women, immigrant and refugee women). Policy initiatives that improve the social conditions for these women will likely, ultimately, have positive outcomes on the need for mental health services and barriers to mental health service utilization. Considering Ontario women, overall, report relatively low rates of unmet mental health needs, research and policy should focus on identifying, quantifying and reducing barriers to mental health care among these high-risk populations. Specific needs of individual sub-populations are described in Part Three.

### Table 19.1: Barriers to Mental health Care for Women with Depression in Ontario

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<td>General Barriers</td>
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<tr>
<td>Barriers to Seeking Mental Health Care</td>
<td>• Depression is unrecognized by primary care clinicians&lt;br&gt;• Treatment does not conform to standards in practice guidelines&lt;br&gt;• Poor adherence with antidepressant medications&lt;br&gt;• Lack of availability of treatments other than antidepressants&lt;br&gt;• Societal stigma&lt;br&gt;• Lack of insurance&lt;br&gt;• Lack of a regular primary health-care provider&lt;br&gt;• Lack of sufficient time with provider</td>
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<td>Barriers in High-Risk Populations</td>
<td>• Lack of research evidence for best practices with respect to screening, prevention and treatment of depression among sub-populations of women&lt;br&gt;• Structural issues including wait times, short physician visits, physician shortages&lt;br&gt;• Lack of continuity of care&lt;br&gt;• Belief that distress is ‘normal’ and does not require treatment&lt;br&gt;• Previous negative experiences with health-care providers&lt;br&gt;• Social isolation and lack of knowledge about available supports</td>
</tr>
</tbody>
</table>
REFERENCES


Browne, G., Byrne, C., Roberts, J., Gafni, A., & Whittaker, S. (2001). When the bough breaks: provider-initiated comprehensive care is more effective and less expensive for sole-support parents on social assistance. *Social Science & Medicine, 53*, 1697-1710.


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Inner City Health Unit (2003). *Coordination For Women Who Are Homeless or At-Risk of Homelessness: An Inventory of Initiatives* Toronto: St. Michael’s Hospital for Ontario Women’s Health Council, Ontario’s Ministry of Health and Long Term Care.


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Miranda, J. & Green, B. L. (1999). The need for mental health services research focusing on poor young women. *Journal of Mental Health Policy and Economics, 2*, 73-80.


Ontario’s Ministry of Health and Long-Term Care (2002). *Ontario’s Health System Performance Report* Toronto: MOHLTC.


APPENDIX A: SEARCH STRATEGY AND KEYWORDS

MELISSA SEVERN

QUALITY FILTERS

In order to identify systematic reviews and meta-analyses in the various databases two strategies were employed: namely the use of a quality filter and/or the use of the publication type limit. In the case where a database included a limit for either systematic review or meta-analysis both the limit and the filter were used.

Once the terms specific to the search were entered into the database a quality filter was run to search for all articles in the database that were classified as either a systematic review or meta-analysis. The subject specific search and the quality filter search would then be connected by the Boolean operator and resulting in subject specific systematic reviews or meta-analyses. All filters used in this report were gathered and adapted by the University Health Network Library from the following sources:

MEDLINE Systematic Review Filter-Short Version
Hunt D.L. and McKibbon K.A. Locating and Appraising Systematic Reviews.

CINAHL Meta-Analysis Filter
Adapted by Kathryn Nesbit, University of Rochester Medical Center, University of Rochester Medical Center, from Medline hedges developed by Ann McKibbon and Cindy Walker-Dilks of McMaster University:

PsycINFO Systematic Review Filter
Adapted from search hedges developed by Ann McKibbon, McMaster University, with Angela Eady and Susan Marks, as found in *PDQ Evidence-Based Principles and Practice*, 1999.

EMBASE
Results were limited by publication type to systematic review or meta-analysis.
# Keywords

Ovid MEDLINE-Depression Search Strategy

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APPENDIX B: SOURCES OF GREY LITERATURE

Grey literature was identified by the information specialist through the use of Internet search engines and direct contact with government and non-profit agencies and institutes.

CITED IN REVIEW

GOVERNMENT

• City of Toronto
  • Homelessness Action Task Force
• Public Health Agency of Canada
  • Major Chronic Diseases Surveillance Online
  • Hospital Report Project
• Region of Peel
  • Peel Public Health
• Ontario Ministry of Health and Long-Term Care
  • Ontario Women’s Health Council
• Statistics Canada
  • 2001 Census
  • CANSIM
  • Canadian Community Health Survey 1.2
  • Health Indicators

AGENCY/INSTITUTE

• Canadian Cancer Society
• Canadian Institute for Health Information
• Canadian Institute of Child Health
• Canadian Mental Health Association, Ontario
• Canadian Network for Mood and Anxiety Treatment
• Canadian Psychiatric Association
• Canadian Research Institute for the Advancement of Women
• Canadian Task Force on Preventive Health Care
• Central East Health Information Partnership
• Centre for Addiction & Mental Health
• Inner City Health Research Unit, St. Michael’s Hospital
• Institute for Clinical Evaluative Sciences
• Ontario Guidelines Advisory Committee
• World Health Organization
APPENDIX B: SOURCES OF GREY LITERATURE

NOT CITED

GOVERNMENT

• Canada
  • Alberta Mental Health Board
  • British Columbia Ministry of Health Services
  • Status of Women Canada

• Ontario
  • HealthyOntario.com

• United States
  • U.S. Surgeon General
  • National Institute of Mental Health

• International
  • Commonwealth of Australia
  • U.K. Department of Health

AGENCY/INSTITUTE

• Association of Gay and Lesbian Psychiatrists (U.S.)
• Canada Health Infoway
• Canadian Alliance on Mental Illness and Mental Health
• Canadian Coordinating Office for Health Technology Assessment
• Canadian Health Coalition
• Canadian Health Economics Research Association
• Canadian Health Network
• Canadian Health Services Research Foundation
• Canadian Healthcare Association
• Canadian Institutes of Health Research
• Canadian Nurses Association
• Canadian Medical Association
• Canadian Policy Research Network
• Canadian Stroke Network
• CancerCare
• Cardiac Care Network of Ontario
• Centre for Research in Women’s Health
• Centre for Rural and Northern Health Research
• The College of Physicians and Surgeons of Ontario
• Human Resources and Social Development Canada
• Institute of Health Economics
• Institute for Work and Health
• Joint Policy and Planning Committee
• Networks of Centres of Excellence
• Ontario College of Family Physicians
• Ontario Hospital Association
• Ontario Medical Association
• Ottawa Health Research Institute, Ottawa Hospital
• Street Health
• United Way of Greater Toronto
Appendix C: Glossary

Annual Prevalence: The total number of persons with the disease or attribute at any time during the year.

Bisexual: An individual who is attracted to people of either sex or gender.

Heterosexism: Systemic policies and practices that favour heterosexual individuals and couples over LGBTQ individuals and couples; a frame of mind or worldview that holds heterosexuality at its core.

Homophobia: Prejudice against (fear or dislike of) LGBTQ individuals and behaviour based on this prejudice.

Incidence: The number of instances of illness commencing, or of persons falling ill, during a given period in a specified population.

Internalized Homophobia: Unintentionally assuming the homophobic values and attitudes of one’s environment as one’s own.

Lesbian/gay: Terms to describe individuals whose primary sexual and affectional relationships are with members of the same sex.

Lifetime Prevalence: The total number of persons known to have had the disease or attribute for at least part of their lives.

Period Prevalence: The total number of persons known to have had the disease or attribute at any time during a specified time.

Point Prevalence: The number of persons with a disease or an attribute at a specified point in time.

Transgender: A term for someone who crosses gender norms, but may choose not to medically modify their body. People who identify as transgender may identify as, and express, a gender that does not match their biological sex, or may not embrace binary gender systems at all.

Transsexual: A term for someone who feels internally that they are the opposite sex and gender from that which they were socialized from birth. Transsexuals may undergo surgery and/or hormone therapy in order to make their bodies fit what they feel is their true sex and gender.