



# Mind Pad

Canada's student written, edited,  
and published psychology newsletter.

# Notes d'idées

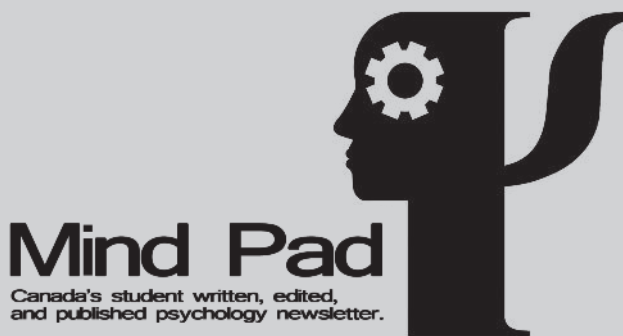
Le bulletin rédigé, édité et publié par les étudiants  
de la Société canadienne de la psychologie.

FALL 2017 – AUTOMNE 2017

CANADIAN  
PSYCHOLOGICAL  
ASSOCIATION



SOCIÉTÉ  
CANADIENNE  
DE PSYCHOLOGIE



## Notes d'idées

Le bulletin rédigé, édité et publié par les étudiants de la Société canadienne de la psychologie.

*Mind Pad* has two mandated goals:

1. It aims to provide a professional newsletter that is written and reviewed by students of psychology who are affiliates of the Canadian Psychological Association. The content of the newsletter should be of interest to all who are practicing and studying psychology, but the primary audience of the newsletter is students of psychology.
2. It aims to offer studying psychology researchers and writers an opportunity to experience a formal submission process, including submission, review, and resubmission from the points of view of both submitter and reviewer/editor.

*Mind Pad* is a student journal of the Canadian Psychological Association (CPA) over which the CPA holds copyright. The opinions expressed are strictly those of the authors and do not necessarily reflect the opinions of the Canadian Psychological Association, its officers, directors, or employees. *Mind Pad* is published semi-annually, only in electronic form and made available to members of the CPA and the general public.

Le mandat de *Notes d'idées* a deux objectifs :

1. Fournir un bulletin professionnel rédigé et évalué par les étudiants en psychologie qui sont membres affiliés de la Société canadienne de psychologie. Le contenu devrait être d'intérêt à tous les praticiens et étudiants en psychologie, mais les étudiants en psychologie sont les lecteurs cibles.
2. Fournir aux étudiants en psychologie l'opportunité de connaître le processus formel de soumission y compris la soumission, la révision, et la resoumission du point de vue d'auteur et d'évaluateur/redacteur.

*Notes d'idées* est une revue étudiante de la Société canadienne de psychologie (SCP). La SCP réserve les droits d'auteur. Les opinions exprimées sont strictement celles des auteurs et ne reflètent pas nécessairement les opinions de la Société canadienne de psychologie, ses représentants, directeurs, ou employés. *Notes d'idées* paraît deux fois par année et n'est publié qu'en format électronique. Le bulletin est disponible aux membres de la SCP et au public.

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# Exploring the Impact of Student Leadership

Zarina A. Giannone, M.A., University of British Columbia

The summer of 2017 marks the end of three incredible years spent representing students in various leadership positions within the Canadian Psychological Association's (CPA) Section for Students in Psychology. While it has always been my professional home as a student-affiliate member, the CPA has recently acquired new and enhanced meaning to me.

My engagement with the CPA in student representative positions has positively enriched my training in psychology, while contributing a wealth of skills and knowledge about psychology in Canada. It has been my experience that the CPA deeply values and respects the student perspective, which has presented an exceptional opportunity for me to contribute to causes that I am passionate about. Additionally, this experience has enabled the development of integral leadership skills which can mobilize future academic and career opportunities. Professional service roles that I have held or currently hold with the CPA include:

- Student Representative, CPA Board of Directors (2014-2017)
- Chair-Elect, Chair, and Past-Chair of the Section for Students (2014-2017)
- Program Founder/Coordinator of the CPA Student Mentorship Program (2015-2016)
- Student Member on the CPA Membership Committee (2014-present), Professional Affairs Committee (2015-present), and the Canadian National Committee on the International Union of Psychological Science (2016-present)
- Editor-in-Chief of Mind Pad (2016-2017)

In all of these roles, I have worked alongside incredible leaders, students and professional members alike, who are truly pioneers and innovators in their chosen fields. These individuals have embraced our collective student voice and are actively paving the way for a bright future in psychology. Becoming involved in the CPA's professional community has been a privilege, an experience that I will always cherish. I

plan to pursue opportunities for involvement going forward. As I depart from my role as Mind Pad's Editor-in-Chief, I hope to encourage students to seek out opportunities that amplify their commitment to their discipline, that spark interest, passion, and creativity, and that push them outside of their comfort zones. I am confident that it is there where much of our true learning happens.

Giannone, Piotrowski, Guzman-Ratko, and O'Brien (2017) presented a workshop on leadership in psychology at the 2017 CPA Annual Convention in Toronto, Ontario this past June. The chief message that was communicated to attendees pertained to the inherent leadership training that is embedded within the psychology student experience. Scientist and practitioner models of training in psychology covertly train students to be leaders and afford the development of integral skills such as communication, supervisory competencies, adaptability, and mindfulness, among several others. It is essential that students bring their attention to the diverse set of leadership skills that they have already acquired and work to gain experiences that may help refine them. There are multiple ways to gain leadership experience including networking, undertaking specific coursework, and, of course, through volunteer work. As described by Giannone et al. (2017), there is much opportunity for graduate students and psychologists to hone their leadership skills and make a difference in their chosen areas (e.g., psychologists in primary management positions; students on steering committees). While it can be challenging to find the time, leadership is a worthwhile experience and I wholeheartedly invite our readership to pursue new opportunities, including those offered by the CPA Section for Students in Psychology. For more information on how to get involved or to learn about leadership opportunities, please visit: <http://www.cpa.ca/students/>

I am pleased to introduce the articles which have been published in the 2017 Summer Issue of Mind Pad: "Effects of thin images on women's state self-

esteem” (Carolyn Ogilvie); “The effects of interviewer rapport on children’s memory recall during interviewing” (Natalie Frost); “Meditative exposure therapy: A proposed therapeutic treatment program for inmates with PTSD” (Julia O’Loughlin and Myfanwy Bakker); “Alexithymia and emotion recognition in people with Autism Spectrum Disorder: A review” (Ruby Jamil and Anne-Marie DePape); and, “Shifting from the current model of diagnosis and treatment of ADHD to a strengths-based approach” (Juliane Dmyterko). I hope you enjoy this issue and learn about our student colleagues’ work.

I would like to extend my gratitude to Mind Pad’s 2016-2017 Editorial Board including our Associate Editors (Mariem Boukadi and Sarah Bourdeau), Graduate Student Reviewers (Lillian MacNeill, Nicole Poirier, Sara Holland, Suzanne Chomycz, Lindsay Huska, Elliot Lee, Pier-Luc de Chantal, and Maxime Montembeault), and Undergraduate Student Reviewers (Colton Macdonald, Sara Ahmadian, Ratanak Ly, Patryk Siergiej, and Hayley Riel). I would also like to thank the Canadian Psychological Association and Dr. Lisa Votta-Bleeker, CPA’s Deputy Chief Executive Officer and Science Director, as this issue would not have

been possible without their support. I would like to extend a warm welcome to our incoming-Editor, Ms. Kyrsten Grimes, M.A. I am confident that Mind Pad will continue to grow under her strong leadership.

Please feel free to contact me if you have any questions, comments, or concerns about the current issue at [zarina.giannone@gmail.com](mailto:zarina.giannone@gmail.com). If you are interested in submitting a manuscript or would like to get involved as a peer-reviewer, please visit our website for further information: <http://www.cpa.ca/students/MindPad>. Happy reading!

Warm regards,  
Zarina Giannone, M.A.  
Editor-in-Chief, *Mind Pad*



#### References

Giannone, Z., Piotrowski, A., Guzman-Ratko, M., & O’Brien, A. (2017, June). Leadership in psychology: Harnessing transferable skills to transform your career. Paper presented at the Canadian Psychological Association’s 78th Annual Convention, Toronto, Canada.



# Survol de l'impact du leadership étudiant

Zarina A. Giannone, M.A., Université de la Colombie-Britannique

L'été 2017 marque, pour moi, la fin de trois années extraordinaires passées à représenter les étudiants à différents postes de direction au sein de la Section des étudiants en psychologie de la Société canadienne de psychologie (SCP). Bien que, en ma qualité de membre étudiante, la SCP ait toujours été ma communauté professionnelle, celle-ci revêt désormais, pour moi, une signification nouvelle et étendue.

Mon engagement auprès de la SCP à des postes de représentante des étudiants a enrichi considérablement ma formation en psychologie, tout en me permettant d'acquérir une foule de compétences et de connaissances au sujet de la psychologie au Canada. Ce que j'ai retenu de mes années d'implication, c'est que la SCP accorde beaucoup de valeur au point de vue des étudiants et respecte l'opinion de ses membres étudiants. Mon expérience m'a donné l'occasion exceptionnelle de contribuer à des causes qui m'intéressent vivement. Elle m'a aussi permis d'acquérir des compétences complètes en leadership, qui sont à même d'asseoir ma future carrière universitaire et professionnelle. Mon implication professionnelle passée ou présente auprès de la SCP est la suivante :

- Représentante des étudiants, conseil d'administration de la SCP (2014-2017)
- Présidente désignée, présidente et présidente sortante de la Section des étudiants (2014-2017)
- Fondatrice et coordonnatrice du programme de mentorat étudiant de la SCP (2015-2016)
- Membre étudiante du Comité de l'adhésion de la SCP (de 2014 à aujourd'hui), du Comité des affaires professionnelles (de 2015 à aujourd'hui) et du Comité national canadien de l'Union internationale de psychologie scientifique (de 2016 à aujourd'hui)

- Rédactrice en chef de *Note d'idées* (2016-2017)

Dans chacune de ces implications, j'ai travaillé aux côtés de dirigeants, d'étudiants et de professionnels extraordinaires, qui sont de véritables pionniers et de vrais visionnaires dans leur domaine. Ces personnes ont adopté la voix collective des étudiants et prépa-

rent activement l'avenir de la psychologie, qui s'annonce brillant. M'impliquer auprès de la communauté professionnelle que constitue la SCP a été un privilège et une expérience dont je chérirai toujours le souvenir. J'ai l'intention de continuer à m'impliquer. Alors que je quitte mon poste de rédactrice en chef de *Notes d'idées*, j'aimerais encourager les étudiants à chercher sans cesse à renforcer leur engagement à l'égard de leur discipline, à cultiver leur intérêt, leur passion et leur créativité et à sortir de leur zone de confort, en restant à l'affût de toutes les occasions qui s'offrent à eux. Je suis convaincue que c'est par ce moyen qu'une grande partie de notre apprentissage s'effectue véritablement.

Giannone, Piotrowski, Guzman-Ratko et O'Brien (2017) ont présenté un atelier sur le leadership en psychologie au congrès annuel de la SCP de 2017, tenu en juin dernier à Toronto, en Ontario. Le message principal qui a été communiqué aux participants concernait la formation au leadership indissociable de l'expérience pédagogique des étudiants en psychologie. De manière plus ou moins intentionnelle, la formation en psychologie, fondée sur le modèle chercheur-praticien, prépare les étudiants à devenir des leaders et permet à ceux-ci d'acquérir des compétences complètes, comme la communication, les compétences en supervision, la capacité d'adaptation et la pleine conscience, pour ne nommer que celles-là. Il est essentiel que les étudiants se focalisent sur l'éventail de compétences en leadership qu'ils ont déjà acquises et qu'ils soient ouverts aux expériences qui sont susceptibles d'améliorer ces compétences. Il y a plusieurs moyens d'acquérir de l'expérience en leadership, notamment en faisant du réseautage, en suivant des cours portant précisément sur le sujet, et, bien sûr, en s'impliquant bénévolement. Comme le décrivent Giannone et ses collaborateurs (2017), pour les diplômés en psychologie et les psychologues, les possibilités de parfaire ses compétences en leadership et d'innover dans le secteur choisi (p. ex., assumer un poste de direction, pour les psychologues; faire partie d'un comité directeur, pour les

étudiants) sont innombrables. Même s'il est parfois difficile de trouver le temps de le faire, l'expérience du leadership en vaut la peine, et j'invite cordialement nos lecteurs à saisir toutes les possibilités qui se présentent, y compris à la direction de la Section des étudiants en psychologie de la SCP. Pour plus de renseignements sur la façon de s'impliquer ou pour en savoir plus sur les possibilités de leadership, rendez-vous à l'adresse <http://www.cpa.ca/etudiants/>.

Je suis heureuse de vous présenter les articles publiés dans le numéro d'été de 2017 de *Note d'idées* : « Effects of thin images on women's state self-esteem » (Carolyn Ogilvie); « The effects of interviewer rapport on children's memory recall during interviewing » (Natalie Frost); « Meditative exposure therapy: A proposed therapeutic treatment program for inmates with PTSD » (Julia O'Loughlin et Myfanwy Bakker); « Alexithymia and emotion recognition in people with Autism Spectrum Disorder: A review » (Ruby Jamil et Anne-Marie DePape); « Shifting from the current model of diagnosis and treatment of ADHD to a strengths-based approach » (Juliane Dmyterko). J'espère que vous apprécierez ce numéro et que vous en apprendrez sur le travail de vos collègues étudiants.

Je tiens à exprimer ma gratitude au comité de rédaction de *Note d'idées* en 2016-2017, notamment les rédactrices en chef adjointes (Mariem Boukadi et Sarah Bourdeau), les évaluateurs du premier cycle (Lillian MacNeill, Nicole Poirier, Sara Holland, Suzanne Chomycz, Lindsay Huska, Elliot Lee, Pier-Luc de Chantal et Maxime Montembeault) et les évaluateurs des cycles supérieurs (Colton Macdonald, Sara Ahmadian, Ratanak Ly, Patryk Siergieł et Hayley Riel).

J'aimerais également remercier la Société canadienne de psychologie (SCP) et la D<sup>re</sup> Lisa Votta-Bleeker, directrice générale associée et directrice de la Direction générale de la science de la SCP, car, sans leur soutien, le présent numéro n'aurait pu voir le jour. Je tiens également à souhaiter chaleureusement la bienvenue à notre nouvelle rédactrice en chef, Mme Kyrsten Grimes, M.A. Je suis convaincue que *Note d'idées* continuera de se développer sous sa direction.

N'hésitez pas à communiquer avec moi si vous avez des questions, des commentaires ou des préoccupations au sujet du présent numéro, en écrivant à [zarina.giannone@gmail.com](mailto:zarina.giannone@gmail.com). Si vous voulez proposer un manuscrit ou désirez vous impliquer en tant qu'évaluateur d'articles, veuillez visiter notre site Web pour de plus amples renseignements : <http://www.cpa.ca/etudiants/MindPadfr/>. Bonne lecture!

Sincères salutations,  
Zarina Giannone, M.A.  
Rédactrice en chef, *Notes d'idées*



## Références

Giannone, Z., A. Piotrowski, M. Guzman-Ratko et A. O'Brien (juin 2017). « Leadership in psychology: Harnessing transferable skills to transform your career ». Communication présentée au 78e congrès annuel de la Société canadienne de psychologie, tenu à Toronto, au Canada.

# Meditative Exposure Therapy: A Proposed Therapeutic Treatment Program for Inmates with Posttraumatic Stress Disorder

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## Abstract

In North America, posttraumatic stress disorder (PTSD) is disproportionally represented in inmate populations (21%) compared to the general population (8%). Despite significantly higher rates of PTSD among inmates, few treatment approaches are being proposed or evaluated for efficacy within the forensic setting. Continued suffering from PTSD in inmate populations imposes numerous hindrances to rehabilitation and is a known contributor to recidivism. In this paper, we will outline a proposed program called *Meditative Exposure Therapy* to address PTSD in inmate populations. This program combines Prolonged Exposure Therapy (PE) and Mindfulness Based Stress Reduction (MBSR). We propose that the addition of MBSR within a PE framework will improve the effectiveness of PE on PTSD treatment by providing important emotion regulation skills that reduce the risk of recidivism.

## Résumé

En Amérique du Nord, le trouble de stress post-traumatique (TSPT) est disproportionnellement représenté dans la population carcérale (21 %) comparativement à la population générale (8 %). Malgré le taux considérablement plus élevé de TSPT chez les détenus, peu d'approches thérapeutiques sont proposées ou font l'objet d'une évaluation afin d'en déterminer l'efficacité dans le contexte judiciaire. Le TSPT non traité dans la population carcérale nuit considérablement à la réadaptation du détenu qui en est atteint et contribue à la récidive. Dans le présent article, nous décrivons un programme de traitement appelé « thérapie d'exposition par la méditation » pour traiter le TSPT dans la population carcérale. Le programme que nous proposons combine la thérapie d'exposition prolongée et la réduction du stress basé sur la pleine conscience. Nous faisons valoir que l'a-

jout de la réduction du stress basé sur la pleine conscience dans le cadre de la thérapie d'exposition prolongée améliorera l'efficacité de cette dernière pour le traitement du TSPT, car elle fera acquérir à la personne atteinte de TSPT des compétences de régulation des émotions extrêmement utiles, qui sont à même de réduire le risque de récidive.



In North America, the number of people who experience potentially traumatic events (PTEs) is substantial, with estimates ranging from 40 to 80% (Breslau, Davis, Andreski, & Peterson, 1991; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Following exposure to PTEs, an estimated 8% of people develop posttraumatic stress disorder (PTSD) symptomatology (Kessler, 2005; Statistics Canada). Approximately 9.2% of Canadians have experienced PTSD in their lifetime (Dückers, Alisic, & Brewin, 2016), with 1.7% of the population currently suffering from PTSD (Statistics Canada, 2013). A large body of research (e.g., Breslau et al., 1991; Brewin, Andrews & Valentine, 2000; McFarlane, 2000) has revealed that individual risk factors are the key to understanding the differential development of PTSD symptomatology among people exposed to potentially traumatic events. Among the most common of such risk factors are substance abuse, history of childhood maltreatment, low socioeconomic status, and psychiatric illness (Brewin et al., 2000).

As the risk factors for PTSD development—substance abuse, history of childhood maltreatment, low socioeconomic status, and psychiatric illness—are common among inmates (see Wakerfield & Uggen, 2010 for a review), it is not surprising that prison populations report higher levels of PTSD compared to the general population (Frueh, Grubaugh, Elhai, & Ford, 2012). Indeed, the prevalence rate of PTSD in North American inmate populations is estimated to be as high as 21% (Goff, Rose, Rose, & Purves, 2007). De-

spite high PTSD prevalence in inmate populations, and the mounting evidence that PTSD increases the likelihood of recidivism (Kubiak, 2004), empirically supported interventions for PTSD are not provided in most correctional facilities (Frueh et al., 2012). Rather, psychiatric treatment in prisons tends to be limited to psychotropic medication and occasional one-on-one meetings with a forensic mental health clinician (Metzner & Dvoskin, 2006). Given the heightened predisposition of this population to develop PTSD, and the significant barriers to treatment in the forensic setting, further research toward the development and evaluation of PTSD treatment programs for inmates is needed.

What follows is a proposal for a unique and novel therapeutic intervention for inmates with PTSD called *Meditative Exposure Therapy*. This intervention combines two empirically supported treatments—Prolonged Exposure Therapy (PE) and Mindfulness-Based Stress Reduction (MBSR)—for the purposes of PTSD treatment and reduced recidivism.

To begin, we will provide a brief overview of PE and MBSR separately. Following this review, a proposed combination of the two treatment approaches will be outlined. In proposing a combined treatment approach to PTSD in inmate populations, it is not our intention to criticize the singular administration of either PE or MBSR. Instead, we are proposing that when combined, each therapy may be enhanced by the other. Specifically, PE, while an efficacious PTSD treatment (Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010), does not attend to the development of emotion regulation skills. Such skills have been found to reduce criminal activity (Day, 2009), and thus, may prevent recidivism. In contrast, MBSR effectively enhances emotion regulation skills (Hayes & Feldman, 2004), but does not sufficiently address PTSD symptomatology, a necessary element of rehabilitation. As such, we believe more successful therapeutic outcomes will be elicited from combining these approaches.

### **Prolonged Exposure Therapy for PTSD**

Prolonged exposure therapy (PE) is a treatment rooted in emotional processing theory (Foa, 2011). Within this theory, the central underlying factor in PTSD is the continued operation of the fear structure—a network of memories containing information about the feared stimuli, the associated physiological reactions, and the meaning of these stimuli and reactions. For people with PTSD, the fear structure is large and easily activated by erroneous (i.e., objectively non-threatening) stimuli that trigger a memory of the original traumatic experience. The frequency with which the fear structure is activated in the trauma survivor

causes the world around them to feel dangerous and unsafe, leading to several PTSD symptoms (e.g. hypervigilance, easily startled, etc.). As a means of escaping the sense of ever-present danger, feared thoughts and situations are actively avoided, leaving the trauma experience unprocessed.

In order to foster emotional processing and target problematic avoidance that maintains the fear structure in PTSD, PE utilizes systematic confrontation of trauma-associated stimuli (Foa, 2011). Systematic confrontation involves gradual exposure to fear-eliciting and avoided stimuli, using techniques such as *in-vivo* (i.e., direct confrontation of feared objects, activities, or situations) or imaginal exposure (i.e., repeated recounting of the trauma aloud). Following *in-vivo* or imaginal exposure a discussion of the revisiting experience is conducted.

The goal of PE is to dismantle the erroneous beliefs that maintain symptoms of PTSD (e.g., safe stimuli are harmful and need to be avoided and that coping with distress is impossible). For PE to operate effectively, two necessary conditions must be met: (a) the fear structure must be activated; and (b) new information that is incompatible with the current fear structure must be made available.

Randomized controlled trials have shown PE to be an effective treatment for PTSD. Indeed, a meta-analytic review of thirteen studies, with a total sample of 658 participants, concluded that patients treated with PE had better results than 86% of patients in inactive (waitlist) and active (psychological placebo) control conditions (Powers et al., 2010). Effect sizes were robust, and findings supported the use of PE as the front-line treatment for those with PTSD.

### **Mindfulness for Inmate Rehabilitation**

In the United States, 70% of released prisoners will experience recidivism, suggesting that rehabilitative measures are not being effectively delivered within the current system (Himelstein, 2011). With increasing evidence that poor emotion regulation capabilities increases propensity toward criminal activity (Day, 2009), a case can be made for programs aimed at building emotion regulation techniques as a means of reducing the risk of inmate recidivism.

One such program, Mindfulness-Based Stress Reduction (MBSR), is an eight-week meditation training that seeks to engage trainees in sustained, non-reactive attention to their on-going mental processes. Developed in 1979 by Jon Kabat-Zinn, MBSR combines three techniques—awareness of breath in sitting meditation, a body scan (i.e. bringing awareness systematically to all regions of the body while in a lying down position), and a series of Hatha yoga postures (Himel-



stein, 2011). During the initial weeks of the program, the body scanning technique is practiced for 45 minutes, followed by 10 minutes of a sitting meditation. Yoga postures are incorporated and modified to fit the practitioners' needs. Over time, the amount of time dedicated to the body scan technique is decreased, while the time allotted for sitting meditation increases. Ultimately, the purpose of this practice is to develop the capacity for greater conscious awareness and voluntary control over habitual reactions to emotional stimuli (Samuelson, Carmody, Kabat-Zinn, & Bratt, 2007). Moreover, MBSR reduces avoidance, a hallmark characteristic of PTSD, by promoting non-judgmental acceptance of one's experience, and shifting the way in which thoughts and emotions are experienced (Chambers, Gullone, & Allen, 2009).

In the corrections setting, MBSR has been tested as a way of increasing inmates' capacity for less reactive responses to intense emotional states (Himelstein, 2011). Across six Massachusetts correctional facilities, 1350 inmates have completed an MBSR program, as described above, while being assessed via measures evaluating changes in hostility, self-esteem and mood disturbance (Samuelson et al., 2007). In all institutions evaluated, both men and women showed statistically significant reductions in hostility levels and mood disturbances as well as statistically significant increases in self-esteem. These changes are likely to contribute to healthier rehabilitative environments for inmates.

### **Meditative Exposure Therapy**

What follows is a proposal for a therapeutic program—Meditative Exposure Therapy—for inmates with PTSD. This program proposes a unique combination of PE and MBSR and intends to integrate emotion regulation skill development with the gold standard for PTSD treatment. Based on research showing that poor emotion regulation capabilities and PTSD symptomatology are correlates of recidivism (Day, 2009; Kubiak, 2004), we believe this program may enhance inmate rehabilitation and prevent post-release re-offences more effectively than either treatment in isolation. Further, based on empirical support for MBSR (see Himelstein, 2011 for a review), we assert that various elements of PE, particularly the exposure and insight building components, will be improved as a result of the integration of MBSR. Meditative Exposure Therapy consists of four therapeutic phases—each outlined separately below—designed to be conducted in a linear, sequential manner.

We believe that this treatment program has the potential for use across North American prisons given the relatively low cost that would be incurred through its

delivery and the trans-cultural nature of mindfulness practice (Fuchs, Lee, Roemer, & Orsillo, 2011). Indeed, the vast majority of human cultures engage in practices involving deep, focused thought, listening, and attention (Yellowbird, 2011). In a Canadian context where Aboriginal peoples are disproportionally represented in correctional facilities (Statistics Canada, 2016), mindfulness may have increased utility given a shared emphasis in Aboriginal and Eastern philosophies of healing on integration of body, mind, spirit components (Dreger, MacKenzie, & McLeod, 2015).

#### *Phase I*

The overarching purpose of Phase I of the Meditative Exposure Therapy program is the building of a therapeutic relationship between participant and clinician. During this introductory phase, client history will be taken and assessment of PTSD severity and manifestation will be conducted. Additionally, psychoeducation on PE and MBSR will be provided to each participant and questions and concerns will be addressed. Phase I will last for two 50 minute sessions, though a third session may be added if necessary. Goals of Phase I are to build trust and rapport between participant and clinician, and to facilitate comprehension of the therapeutic interventions the participant will undergo. Additionally, Phase I seeks to identify the conditioned stimulus or stimuli (i.e. triggering stimuli similar to that involved in the traumatic event) to which the participant will later be exposed.

#### *Phase II*

Phase II involves two, one hour long sessions consisting of an introduction to the meaning and practice of mindfulness. Participants will be guided through various mindfulness activities designed to facilitate non-judgmental observation of their thoughts and behavioural tendencies. Particular attention will be paid to mindful breathing and body scanning techniques, taught as strategies to mitigate autonomic nervous system activation to trauma-related thoughts and memories (Kelly & Garland, 2016). Exploration and awareness of physiological reactions to emotions will also be emphasized. The aim of Phase II is to reduce avoidance of trauma-related thoughts by encouraging thought observation and present-moment awareness. Moreover, the purpose of Phase II is to acquire skills that enhance bodily connection and emotional awareness. This will prime the client for the following phase of Meditative Exposure Therapy consisting of PE, by increasing the potential for participants to achieve emotional processing. Participants will be instructed to practice mindfulness for a minimum of ten minutes per day outside of scheduled program time.

### Phase III

In Phase III, each participant will undergo an imaginal exposure therapy component of PE. Participants will deliberately and systematically confront their trauma-related stimuli by imagining their trauma experience and recounting it out loud, repeatedly, for a minimum of half an hour. Following imaginal exposure, the participant and clinician will discuss and process the experience of imagining the trauma. During discussion, particular attention will be paid to new insights regarding unhelpful or unrealistic beliefs that exacerbate PTSD symptoms. Given the previous MBSR training, new and subtle insights may be more likely to be realized. Disconfirming evidence of erroneous beliefs will also be emphasized in this phase. Phase III works through habituation—repetitious interaction with the trauma memory decreases the fear and anxiety associated with it (Foa, 2011). Memory organization and increased capacity to distinguish between re-experiencing the trauma versus thinking about the trauma are additional purposes of this phase. Phase III will consist of approximately eight sessions. Additional sessions may be added if necessary.

### Phase IV

During Phase IV, participants will meet once a week for eight weeks for guided MBSR activities—body scans, sitting meditations and yoga postures. Following the latter, group discussions will be led to facilitate a dialogue on how MBSR can be incorporated into everyday life. In the first few weeks of Phase IV, the body scan portion of the session will be longer than the sitting mediation and yoga posture segments. As the weeks progress, more time will be dedicated to sitting mediation. Participants will be asked to maintain a sitting mediation practice for a minimum of half an hour per day outside of scheduled program time. Week six of Phase IV will consist of a full day silent meditation retreat. Phase IV aims to maintain and extend the operation of the previous phase and increase the inmate's overall quality of life. Specific goals include maintaining extinction of the fear structure and decreasing habitual reactivity to intense emotional states. Phase IV works by increasing awareness of one's cognitive processes and the associated habitual reactions that tend to follow. As awareness of the relationship between cognitions and reactions builds, negative habitual reactions can be better anticipated and prevented from manifesting. Subsequently, adaptive reactions will more likely be displayed.

### Methods

Initially, feasibility testing will be conducted by the

author and co-author for the Meditative Exposure Therapy program. Following the guidelines of Bowen et al. (2009) feasibility testing will consist of consultation with subject matter experts on the acceptability and practicality of this intervention within corrections settings as well as assessment for the demand, or estimated need, for an intervention of this nature in the corrections system. We may also consider expansion into similar settings, such as juvenile detentions centres, should such environments be deemed more suitable.

Upon completion of the feasibility testing portion, we will begin pilot testing Meditative Exposure Therapy. We predict that this program will be pilot tested in two locations—a women's prison and a men's prison. For pilot testing, each group will have a minimum of six participants.

Assessments of PTSD symptomatology, criminal thinking style, emotion regulation deficits, and trait mindfulness will be made one week prior to the beginning of the program. The same battery of questionnaires will be administered and assessed for clinically significant change (see Jacobson & Truax, 1991) during post-testing which will occur three months, six months, and twelve months following program completion.

### Measures

**Posttraumatic Stress Disorder Check List-5 (PCL-5; Weathers et al., 2013).** The PCL-5, a 20-item self-report, is a measure of DSM-5 PTSD symptom severity (Weathers et al., 2013). Each item represents a PTSD symptom. Symptom categories include: re-experiencing, avoidance, negative alterations of cognitions and moods, and hyperarousal. Respondents indicate on a 1 (*not at all*) to 5 (*extremely*) scale the degree to which they have been distressed by each symptom. Higher scores indicate greater symptom severity. The PCL-5 has been identified as a gold-standard measure regarding sensitivity, specificity, and diagnostic accuracy (Spont et al., 2015). Across two studies PCL-5 scores were highly correlated ( $r = 0.87$  and  $0.95$ , respectively), and showed strong internal consistency (alphas =  $0.94$  and  $0.97$ ) (Bovin et al., 2015). Evidence for convergent validity with the Clinician Administered PTSD Scale ( $r = 0.81$ ) was found. In the present study, the PCL-5 will be used to assess for the presence and degree of PTSD symptomatology.

**Psychological Inventory of Criminal Thinking Styles (PICTS; Walters, 2009).** The PICTS is an eighty item self-report measure designed to assess eight styles of thinking that support criminal lifestyle (Walters, 2009). Each PICTS item is scored on a four point Likert scale ranging from 1 (*disagree*) to 4 (*strongly*

agree). Results are obtained by summing the raw scores of all eight thinking styles to compute a General Criminal Thinking (GCT) score. An estimation of the measure's internal consistency has been reported with Cronbach's  $\alpha = .93$ . Test-retest reliability is reported as ranging from .81 - .93. Inter-rater reliability is estimated to be .75. PICTS is a unique measure of criminal thinking styles in that it assesses both process and content of thought that correlate with measures of criminality (Walters, Trgovac, Rychlec, DiFazio, & Olson, 2002). Initial study results support the efficacy of the measure as a predictor of recidivism (Walters, 2011). PICTS is valuable in the present research project to evaluate alterations in inmate thinking post intervention and to predict likelihood of recidivism following release.

**Difficulty with Emotion Regulation-Short Form (DERS-18; Victor & Klonsky, 2016).** The DERS-18 is an eighteen-item scale that assesses how effectively people regulate emotions in upsetting situations (Victor & Klonsky, 2016). The instrument reports individuals' typical levels of problematic emotion regulation in six areas: nonacceptance of negative emotions, inability to engage in goal-directed behaviors when distressed, difficulties controlling impulsive behaviors when distressed, limited access to effective emotion regulation strategies, lack of emotional awareness, and lack of emotional clarity. Regulation difficulties assessed by this scale have been shown to predict a variety of clinical outcomes, including aggressive behaviors and substance abuse. Tests from five samples revealed strong internal consistency ( $\alpha = .91$  for the combined sample), concurrent validity, convergent validity and predictive validity (Victor & Klonsky, 2016).

**The Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, Toney, 2006).** The FFMQ is a 39-item questionnaire that measures five facets of mindfulness: observing of internal and external present-moment stimuli; describing or labeling these experiences with words; acting with awareness; nonjudging of internal experiences; and nonreactivity to inner experiences (Baer et al. 2006). The scale yields a total score which can range from 0 to 195. Baer et al. (2006) concluded that the FFMQ has several facets that contribute independently to the prediction of well-being and mediate the relationship between meditation experience and well-being. Internal consistency is evidenced in the adequate to high alpha coefficients for all facets tested in multiple samples, which ranged from (.72 to .92).

## Conclusion

Poor responsiveness to the mental health concerns of inmates contributes to their difficulties in prison, continued criminal activity, and higher recidivism rates (Kubiak, 2004). Particularly troubling is the lack of attention being paid to trauma-related mental health concerns in inmate populations (Goff et al., 2007). The above *Meditative Exposure Therapy* program is a proposal for a treatment approach for PTSD in inmates that combines two efficacious therapeutic approaches: Prolonged Exposure Therapy and Mindfulness Based Stress Reduction. By combining these two treatments, inmates will be offered a first-line treatment for PTSD enhanced with emotional regulation skill delivery, which may aid in longer-term recovery and rehabilitation. We feel that the introduction of this proposed program will offer a more comprehensive mental health treatment for inmates with trauma, thereby by improving their chances for meaningful rehabilitation, reducing their propensity toward criminal activity, and ultimately, improving the quality of their lives.



## References

- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13, 27-45.
- Bovin, M. J., Marx, B. P., Weathers, F. W., Gallagher, M. W., Rodriguez, P., Schnurr, P. P., & Keane, T. M. (2015). Psychometric Properties of the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders—Fifth Edition (PCL-5) in Veterans. *Psychological Assessment*. <http://dx.doi.org/10.1037/pas0000254>. Advance online publication.
- Bowen, D. J., Kreuter, M., Spring, B., Cofta-Woerpel, L., Linnan, L., Weiner, D.....& Fernandez, M. (2009). How we design feasibility studies. *American Journal of Preventive Medicine*, 36(5), 452-457. doi: 10.1016/j.amepre.2009.02.002
- Breslau, N., Davis, G. C., Andreski, P., & Peterson, E. (1991). Traumatic events and posttraumatic stress disorder in an urban population of young adults. *Archives of General Psychiatry*, 48, 216-222.
- Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, 68, 748-766. doi:10.1037/0022-006X.68.5.748
- Chambers, R., Gullone, E., & Allen, N. B. (2009). Mindful emotion regulation: An integrative review. *Clinical Psychology Review*, 29, 560-572. doi:10.1016/j.cpr.2009.06.005
- Day, A. (2009). Offender emotion and self-regulation: Implications for offender rehabilitation programming. *Psychology, Crime and Law*, 15, 119-130.

- doi:10.1080/10683160802190848
- Dückers, M. L., Alisic, E., & Brewin, C. R. (2016). A vulnerability paradox in the cross-national prevalence of post-traumatic stress disorder. *The British Journal of Psychiatry*, 209, 300-305. doi: 10.1192/bjp.bp.115.176628
- Dreger, L. C., Mackenzie, C., & McLeod, B. (2015). Feasibility of a mindfulness-based intervention for Aboriginal adults with type 2 diabetes. *Mindfulness*, 6, 264-280. doi: 10.1007/s12671-013-0257-z
- Foa, E. B. (2011). Prolonged exposure therapy: Past, present, and future. *Depression and Anxiety*, 28, 1043-1047. doi:10.1002/da.20907
- Fuchs, C., Lee, J. K., Roemer, L., & Orsillo, S. M. (2013). Using mindfulness and acceptance-based treatments with clients from nondominant cultural and/or marginalized backgrounds: Clinical considerations, meta-analysis findings, and introduction to the special series. *Cognitive and Behavioral Practice*, 20, 1-12. doi: 10.1016/j.cbpra.2011.12.004
- Frueh, C., Elhai, J. D., Ford, J. D., & Grubaugh, A. (2012). Working with special populations and setting. In *Assessment and treatment planning for PTSD* (pp. 209-228). Hoboken, NJ: Wiley and Sons Inc.
- Goff, A., Rose, E., Rose, S., & Purves, D. (2007). Does PTSD occur in sentenced prison populations? A systematic literature review. *Criminal Behaviour and Mental Health*, 17, 152-162. doi:10.1002/cbm.653
- Hayes, A. M. and Feldman, G. (2004). Clarifying the construct of mindfulness in the context of emotion regulation and the process of change in therapy. *Clinical Psychology: Science and Practice*, 11, 255-262. doi:10.1093/clipsy.bph080
- Himelstein, S. (2011). Meditation research: The state of the art in correctional settings. *International Journal of Offender Therapy and Comparative Criminology*, 55(4), 646-661. doi:10.1177/0306624X10364485
- Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, 59, 12-19. doi: 10.1037/0022-006X.59.1.12
- Kelly, A., & Garland, E. L. (2016). Trauma informed mindfulness based stress reduction for female survivors of interpersonal violence: Results from a stage I RCT. *Journal of clinical psychology*, 72, 311-328. doi: 10.1002/jclp.22273
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, 52, 1048-1060. doi:10.1001/archpsyc.1995.03950240066012
- Kessler, R.C., Chiu, W.T., Demler, O., Merikangas, K.R., & Walters, E.E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62: 617-627. doi:10.1001/archpsyc.62.6.617
- Kubiak, S. P. (2004). The effects of PTSD on treatment adherence, drug relapse, and criminal recidivism in a sample of incarcerated men and women. *Research on Social Work Practice*, 14, 424-433. doi: 10.1177/1049731504265837
- McFarlane, A. C. (2000). Posttraumatic stress disorder: A model of the longitudinal course and the role of risk factors. *Journal of Clinical Psychiatry*, 61, 15-23.
- Metzner, J., & Dvoskin, J. (2006). An overview of correctional psychiatry. *Psychiatric Clinics of North America*, 29, 761-772. doi: 10.1016/j.psc.2006.04.012
- Powers, M. B., Halpern, J. M., Ferenschak, M. P., Gillihan, S. J., & Foa, E. B. (2010). A meta-analytic review of prolonged exposure for posttraumatic stress disorder. *Clinical Psychology Review*, 30(6), 635-641. doi:10.1016/j.cpr.2010.04.007
- Samuelson, M., Carmody, J., Kabat-Zinn, J., & Bratt, M. (2007). Mindfulness-based stress reduction in Massachusetts correctional facilities. *The Prison Journal*, 87(2), 254-268. doi:10.1177/0032885507303753
- Statistics Canada (2016). Adult correctional statistics in Canada 2014/2015. Retrieved November 21<sup>st</sup> 2016 from: <http://search.proquest.com/openview/587d621dc7c9e234dbbe8ce7969e0a3d/1?pq-origsite=gscholar&cbl=44168>
- Stewart, S. & Conrod, P. (2003). Psychosocial models of functional associations between posttraumatic stress disorder and substance use disorder. In *Trauma and substance abuse: Causes, consequences and treatment of comorbid disorders* (pp.29-55). Washington, DC: American Psychological Association.
- Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). The PTSD checklist for DSM-5 (PCL-5). Scale available from the National Center for PTSD - [www.ptsd.va.gov](http://www.ptsd.va.gov).
- Wakefield, S., & Uggen, C. (2010). Incarceration and stratification. *Annual Review of Sociology*, 36, 387-406. doi: 10.1146/annurev.soc.012809.102551
- Walters, G., Trgovac, M., Rychlec, M., Di Fazio, R., & Olson, J. (2002). Assessing change with the psychological inventory of criminal thinking styles. *Criminal Justice and Behavior*, 29, 308-331. doi: 10.1007/s10979-010-9231-7
- Walters, G. D. (2009). The psychological inventory of criminal thinking styles and psychopathy checklist: Screening version as incrementally valid predictors of recidivism. *Law and Human Behavior*, 33, 497-505. doi:10.1007/s10979-008-9167-3
- Walters, G. D. (2011). Predicting recidivism with the psychological inventory of criminal thinking styles and level of service inventory-revised: Screening version. *Law and Human Behavior*, 35, 211-220. doi:10.1007/s10979-010-9231-7
- Wolff, N., Blitz, C., Shi, J., Siegel, J., & Bachman, R. (2007) Physical violence inside prisons: Rates of victimization. *Criminal Justice and Behavior*, 34, 588-599. doi:10.1177/0093854806296830
- Victor, S. E., & Klonsky, E. D. (2016). Validation of a Brief Version of the Difficulties in Emotion Regulation Scale (DERS-18) in Five Samples. *Journal of Psychopathology and Behavioral Assessment*, 1-8.
- Yellowbird, M. (2011). Minding the Indigenous mind: How the practice of mindfulness can contribute to Indigenous education. Retrieved November 21, 2016 from: <http://arikaconsciousness.blogspot.ca/2011/11/minding-indigenous-mind-how-practice-of.html>



# Alexithymia and Emotion Recognition in People with Autism Spectrum Disorder: A Review

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## Abstract

Autism spectrum disorder (ASD) is a neurodevelopmental disorder involving social-communication deficits, and rigid and repetitive behaviours. Individuals with ASD also demonstrate emotion-processing deficits, such as difficulties recognizing their own or others' emotions. There is evidence to suggest that co-occurring alexithymia, or difficulties recognizing emotions within oneself, and not ASD may account for these difficulties. This paper reviews the literature about alexithymia to better understand emotion recognition skills in ASD. Implications are discussed in terms of possible therapeutic interventions involving alexithymia, which may improve emotional and social outcomes among those with ASD.

## Résumé

Le trouble du spectre de l'autisme (TSA) est un trouble neurodéveloppemental impliquant des déficits sur le plan de la communication sociale, ainsi que des comportements rigides et répétitifs. Les personnes atteintes du TSA présentent également des déficits au chapitre du traitement des émotions, comme la difficulté à reconnaître ses propres émotions ou celles d'autrui. Certaines études donnent à penser que c'est la coexistence de l'alexithymie, à savoir la difficulté à reconnaître ses émotions à l'intérieur de soi, et non le TSA, qui expliquerait ces difficultés. Le présent article passe en revue la littérature sur l'alexithymie afin de mieux comprendre les habiletés à reconnaître les émotions chez les personnes atteintes du TSA. Les implications des interventions thérapeutiques possibles en présence d'alexithymie, qui sont susceptibles d'améliorer les acquis sociaux et émotionnels des personnes atteintes du TSA, sont examinées.



Autism spectrum disorder (ASD) is a disorder characterized by social-communication deficits and rigid and repetitive behaviours (American Psychiatric Association, 2013). ASD is also associated with emotion-processing deficits, including difficulties recognizing one's own (Ketelaars, Mol, Swaab, & van Rijn, 2016; Milosavljevic et al., 2016) and others' emotions (Uljarevic & Hamilton, 2013). Current research suggests that co-occurring alexithymia, or difficulty recognizing one's own emotions, and not ASD may account for these difficulties in emotion recognition (Bird et al., 2010; Cook, Brewer, Shah, & Bird, 2013). These findings are supported by the fact that 42 to 55 percent of individuals with ASD experience alexithymia (Ketelaars et al., 2016; Milosavljevic et al., 2016), and it might be that these individuals with ASD struggle to identify emotions within themselves and in turn struggle to identify others' emotions. This paper reviews the literature about alexithymia to better understand emotion recognition skills in ASD.

## Autism Spectrum Disorder and Emotion Recognition Skills

Emotion recognition skills emerge at an early age. Typically developing children distinguish between basic emotions as early as 7 months old, and around 9 months old, babies use facial expressions to gauge situations using social referencing (Walker-Andrews, 1998). Of the basic emotions, children learn to recognize happiness and sadness first and later fear and disgust (Camras & Allison, 1985). As children grow up, their ability to correctly identify facial emotions improves (Durand, Gallay, Seigneuric, Robichon, & Beaudoin, 2007). These basic skills are important to social development because they help children learn about others' feelings and serve as prerequisite skills for higher order emotional processing (Uljarevic & Hamilton, 2013).

Children with ASD struggle with emotion recognition skills, which can hinder their learning about others' emotions and in turn, impact their social relationships (Uljarevic & Hamilton, 2013). However, the ASD literature is divided on whether deficits in

emotion recognition are a characteristic feature of ASD. Some studies show individuals with ASD having emotion recognition deficits compared to controls (e.g., Bal et al., 2010; Corden, Chilvers, & Skuse, 2008; Lindner & Rosen, 2006), while others have not found such deficits (e.g., Castelli, 2005; Robel et al., 2004; Rosset et al., 2008; Rutherford & Towns, 2008). These mixed findings emerge in children (e.g., Balconi, Amenta, & Ferrari, 2012; Rump, Giovannelli, Minshew, & Strauss, 2009) and in adults (e.g., Ashwin, Chapman, Colle, & Baron-Cohen, 2006; Humphreys, Minshew, Leonard, & Behrmann, 2007; Wallace, Coleman, & Bailey, 2008) with ASD. Some studies have concluded that individuals with ASD have difficulty identifying negative emotions, such as fear (e.g., Humphreys et al., 2007; Pelphrey et al., 2002; Wallace et al., 2008), disgust, and sadness (Wallace et al., 2008), rather than having a global deficit in emotion recognition skills (Ashwin et al., 2006). One potential reason for these inconsistencies may relate to functioning level. That is, the ASD literature consists of both low and high functioning children, whereas the adult ASD literature is skewed with mostly high functioning individuals (Harms et al., 2010). Functioning level is an important factor to consider because intellectual quotient (IQ; i.e., intelligence and problem solving skills [Wechsler, 2008]) is related to the ability to understand emotions among children with ASD (Dyck, Piek, Hay, Smith, & Hallmayer, 2006). These inconsistencies call for a strong, evidence-based consensus about the emotion recognition skills of individuals with ASD (Lozier, Vanmeter, & Marsh, 2014).

### **Autism Spectrum Disorder and Alexithymia**

Alexithymia is a Greek word which translates into “lacking words for feelings” and is characterized by difficulties experiencing and explaining one’s own emotions (Lumley, Neely, & Burger, 2007). People with alexithymia respond with vague answers, seem confused, or talk about physical sensations when asked about feelings (Lumley et al., 2007), potentially because they cannot identify their own emotions (Bird & Cook, 2013). Although alexithymia is not a formal diagnosis, it is often associated with poor physical and mental health (e.g., depression, anxiety; Lumley et al., 2007). Thus, understanding alexithymia and its relationship with ASD can help clinicians with case conceptualizations and treatment selection (Lumley et al., 2007).

Approximately 42 to 55 percent of individuals with ASD experience alexithymia (Ketelaars et al., 2016;

Milosavljevic et al., 2016) compared to only 10 percent of the general population (Salminen, Saarijarvi, Aarela, & Toikka, 1999). Bird and Cook (2013) argue that the mixed results of emotion recognition studies can partly be attributed to the high rate of alexithymia in individuals with ASD. As such, they developed the Alexithymia Hypothesis, which suggests that emotion recognition difficulties in individuals with ASD can be attributed to co-occurring alexithymia (Bird & Cook, 2013). Given the high incidence of alexithymia in individuals with ASD, it is important to examine emotion recognition skills more closely in this population. This is particularly the case given that emotion recognition and ASD studies did not concurrently measure alexithymia, and so it is possible that a confounding variable might explain their results (Cook et al., 2013).

Cook and colleagues (2013) sought to identify whether ASD features or alexithymia were associated with difficulties on an emotion recognition task. These researchers recruited 32 alexithymia-matched participants in two groups: 16 participants with ASD (15 males, *M* age = 39 years) and 16 participants without ASD (12 males, *M* age = 33 years). Results indicated that no differences existed between the two groups on their emotion recognition abilities, likely because these groups were matched on alexithymic features (Cook et al., 2013). In the overall sample, alexithymic features accounted for a substantial amount of the variance in emotion recognition skills, whereas ASD features did not (Cook et al., 2013). These results suggest that associated alexithymic features, not ASD features themselves, may account for the emotion recognition difficulties in individuals with ASD.

The fact that alexithymic features overlap with emotion recognition abilities can be explained through the Shared Network Hypothesis. This hypothesis posits that alexithymia co-occurs or possibly underlies emotion-recognition difficulties because the same neural networks are required to process one’s own and others’ emotions (Bird et al., 2010). A specific part of the brain known as the anterior insula has a “dual function” for representing subjective feelings (i.e. feelings within oneself) and empathy (i.e. understanding others’ emotions; Singer et al., 2004; Singer, Critchley, & Preuschoff, 2009). Recent research on the anterior insula suggests that it is important for emotional awareness (Gu, Hof, Friston, & Fan, 2013). For example, this region is activated and causes the observer to feel disgust by viewing another person’s disgusted face (Singer & Tusche, 2014).

Overall, both the Alexithymia Hypothesis and the

Shared Network Hypothesis help explain the overlap between alexithymia and emotion recognition difficulties. That is, if people have difficulty identifying emotions within themselves, it follows that they would struggle to identify others' emotions, given that the same brain areas are needed for these skills (Singer et al., 2004; Singer et al., 2009).

### Significance and Future Research

Further research is needed to understand the relationship between alexithymia and emotion recognition in individuals with ASD. Specifically, matching participants with ASD and controls on their alexithymic features or controlling for alexithymic features in statistical analyses might elucidate the inconsistent findings on whether individuals with ASD truly exhibit emotion recognition deficits (Cook et al., 2013). Examining alexithymia and emotion recognition may also provide information about characteristics of subgroups of individuals with ASD, which may inform treatment-planning decisions (Lai, Lombardo, Chakrabarti, & Baron-Cohen, 2013; Milosevljevic et al., 2016). Finally, shedding light on the relationship between alexithymia and emotion recognition may help individuals with ASD to access appropriate therapy (Kennedy & Franklin, 2002). This therapy may allow those with ASD and alexithymia to focus on recognizing feelings within themselves and others while improving their social relationships.



### References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Ashwin, C., Chapman, E., Colle, L., & Baron-Cohen, S. (2006). Impaired recognition of negative basic emotions in autism: A test of the amygdala theory. *Social Neuroscience*, 1(3), 349–363. doi:10.1080/17470910601040772
- Bal, E., Harden, E., Lamb, D., Van Hecke, A. V., Denver, J. W., & Porges, S. W. (2010). Emotion recognition in children with autism spectrum disorders: Relations to eye gaze and autonomic state. *Journal of Autism and Developmental Disorders*, 40(3), 358–370. doi:10.1007/s10803-009-0884-3
- Balconi, M., Amenta, S., & Ferrari, C. (2012). Emotional decoding in facial expression, scripts and videos: A comparison between normal, autistic and Asperger children. *Research in Autism Spectrum Disorders*, 6(1), 193–203. doi:10.1016/j.rasd.2011.04.005
- Bird, G., & Cook, R. (2013). Mixed emotions: the contribution of alexithymia to the emotional symptoms of autism. *Translational Psychiatry*, 3(7), 1–8. doi:10.1038/tp.2013.61
- Bird, G., Silani, G., Brindley, R., White, S., Frith, U., & Singer, T. (2010). Empathic brain responses in insula are modulated by levels of alexithymia but not autism. *Brain*, 133(5), 1515–1525. doi:10.1093/brain/awq060
- Camras, L. A., & Allison, K. (1985). Children's understanding of emotional facial expressions and verbal labels. *Journal of Nonverbal Behavior*, 9(2), 84–94. doi:10.1007/BF00987140
- Castelli, F. (2005). Understanding emotions from standardized facial expressions in autism and normal development. *Autism*, 9(4), 428–449. doi:10.1177/1362361305056082
- Cook, R., Brewer, R., Shah, P., & Bird, G. (2013). Alexithymia, not autism, predicts poor recognition of emotional facial expressions. *Psychological Science*, 24(5), 723–732. doi:0956797612463582
- Corden, B., Chilvers, R., & Skuse, D. (2008). Avoidance of emotionally arousing stimuli predicts social-perceptual impairment in Asperger's syndrome. *Neuropsychologia*, 46(1), 137–147. doi:10.1016/j.neuropsychologia.2007.08.005
- Durand, K., Gallay, M., Seigneure, A., Robichon, F., & Baudouin, J. Y. (2007). The development of facial emotion recognition: The role of configural information. *Journal of Experimental Child Psychology*, 97(1), 14–27. doi:10.1016/j.jecp.2006.12.001
- Dyck, M. J., Piek, J. P., Hay, D., Smith, L., & Hallmayer, J. (2006). Are abilities abnormally interdependent in children with autism? *Journal of Clinical Child & Adolescent Psychology*, 35(1), 20–33. doi:10.1207/s15374424jccp3501\_3
- Gu, X., Hof, P. R., Friston, K. J., & Fan, J. (2013). Anterior insular cortex and emotional awareness. *The Journal of Comparative Neurology*, 521(15), 3371–3388. doi:10.1002/cne.23368
- Harms, M. B., Martin, A., & Wallace, G. L. (2010). Facial emotion recognition in autism spectrum disorders: A review of behavioral and neuroimaging studies. *Neuropsychology Review*, 20(3), 290–322. doi:10.1007/s11065-010-9138-6
- Humphreys, K., Minshew, N., Leonard, G. L., & Behrmann, M. (2007). A fine-grained analysis of facial expression processing in high-functioning adults with autism. *Neuropsychologia*, 45(4), 685–695. doi:10.1016/j.neuropsychologia.2006.08.003
- Kennedy, M., & Franklin, J. (2002). Skill based treatment for alexithymia: An exploratory case series. *Behavior Change*, 19(3), 158–171. doi:10.1375/bech.19.3.158
- Ketelaars, M. P., Mol, A., Swaab, H., & van Rijn, S. (2016). Emotion recognition and alexithymia in high functioning females with autism spectrum disorder. *Research in Autism Spectrum Disorders*, 21, 51–60. doi:10.1016/j.rasd.2015.09.006
- Lai, M. C., Lombardo, M. V., Chakrabarti, B., & Baron-Cohen, S. (2013). Subgrouping the autism “spectrum”: Reflections on DSM-5. *PLoS Biology*, 11(4), e1001544.

- doi:10.1371/journal.pbio.1001544
- Lindner, J. L., & Rosen, L. A. (2006). Decoding of emotion through facial expression, prosody and verbal content in children and adolescents with Asperger's syndrome. *Journal of Autism and Developmental Disorders*, 36(6), 769–777. doi:10.1007/s10803-006-0105-2
- Lozier, L. M., Vanmeter, J. W., & Marsh, A. A. (2014). Impairments in facial affect recognition associated with autism spectrum disorders: A meta-analysis. *Development and Psychopathology*, 26(4), 933–945. doi:10.1017/S0954579414000479
- Lumley, M. A., Neely, L. C., & Burger, A. J. (2007). The assessment of alexithymia in medical settings: Implications for understanding and treating health problems. *Journal of Personality Assessment*, 89(3), 230–246. doi:10.1080/00223890701629698
- Milosavljevic, B., Leno, V. C., Simonoff, E., Baird, G., Pickles, A., Jones, C. R., ... & Happé, F. (2016). Alexithymia in adolescents with autism spectrum disorder: Its relationship to internalizing difficulties, sensory modulation and social cognition. *Journal of Autism and Developmental Disorders*, 46(4), 1354–1367. doi:10.1007/s10803-015-2670-8
- Pelphrey, K. A., Sasson, N. J., Reznick, J. S., Paul, G., Goldman, B. D., & Piven, J. (2002). Visual scanning of faces in autism. *Journal of Autism and Developmental Disorders*, 32(4), 249–261. doi:10.1023/A:1016374617369
- Robel, L., Ennouri, K., Piana, H. N., Vaivre-Douret, L., Perrier, A., Flament, M. F., et al. (2004). Discrimination of face identities and expressions in children with autism: Same or different? *European Child & Adolescent Psychiatry*, 13(4), 227–233. doi:10.1007/s00787-004-0409-8
- Rosset, D. B., Rondan, C., Da Fonseca, D., Santos, A., Assouline, B., & Deruelle, C. (2008). Typical emotion processing for cartoon but not for real faces in children with autistic spectrum disorders. *Journal of Autism and Developmental Disorders*, 38(5), 919–925. doi:10.1007/s10803-007-0465-2
- Rump, K. M., Giovannelli, J. L., Minshew, N. J., & Strauss, M. S. (2009). The development of emotion recognition in individuals with autism. *Child Development*, 80(5), 1434–1447. doi:10.1111/j.1467-8624.2009.01343.x
- Rutherford, M. D., & Towns, A. M. (2008). Scan path differences and similarities during emotion perception in those with and without autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 38(7), 1371–1381. doi:10.1007/s10803-007-0525-7
- Salminen, J. K., Saarijärvi, S., Ärelä, E., Toikka, T., & Kauhanen, J. (1999). Prevalence of alexithymia and its association with sociodemographic variables in the general population of Finland. *Journal of Psychosomatic Research*, 46(1), 75–82. doi:10.1016/S0022-3999(98)00053-1
- Singer, T., & Tusche, A. (2014). Understanding others: Brain mechanisms and theory of mind and empathy. In P. W. Glimcher & E. Fehr (Eds) *Neuroeconomics: Decision making and the brain* (pp. 513–528). Elsevier: London, UK.
- Singer, T., Critchley, H. D., & Preuschoff, K. (2009). A common role of insula in feelings, empathy and uncertainty. *Trends in Cognitive Sciences*, 13(8), 334–340.
- Singer, T., Seymour, B., O'Doherty, J., Kaube, H., Dolan, R. J., & Frith, C. D. (2004). Empathy for pain involves the affective but not sensory components of pain. *Science*, 303(5661), 1157–1162. doi:10.1126/science.1093535
- Uljarevic, M., & Hamilton, A. (2013). Recognition of emotions in autism: A formal meta-analysis. *Journal of Autism and Developmental Disorders*, 43(7), 1517–1526. doi:10.1007/s10803-012-1695-5
- Walker-Andrews (1998). Emotions and social development: Infants' recognition of emotions in others. In J. G. Warhol (Ed.) *New Perspectives in Early Emotional Development* (pp. 109–118). Johnson & Johnson Pediatric Institute: USA.
- Wallace, S., Coleman, M., & Bailey, A. (2008). An investigation of basic facial expression recognition in autism spectrum disorders. *Cognition and Emotion*, 22(7), 1353–1380. doi:10.1080/02699930701782153
- Wechsler, D. (2008). *Wechsler Adult Intelligence Scale – Fourth Edition Technical and interpretive manual*. San Antonio, TX; NCS Pearson.



# Effects of Thin Images on Women's State Self-Esteem

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## Abstract

This study investigated how women's state self-esteem is affected by viewing thin or curvy images of female bodies. Female undergraduate students aged 19 to 26 years from St. Mary's University in Calgary, Canada were shown three drawings of thin female bodies (N=24) or three drawings of curvy female bodies (N=24). Participants rated each drawing on its appeal using a Likert scale from 1 to 5 (not at all to extremely appealing), and then completed the social and appearance self-esteem dimensions of the State Self-Esteem Scale (SSES). No significant effect between viewing thin images and state self-esteem was found; however, the thinnest image was rated significantly less attractive than all other images. Future researchers should attempt to establish if women's perceptions of acceptable body types are shifting away from the thin ideal in Western society.

## Résumé

La présente étude porte sur la façon dont l'estime de soi situationnelle des femmes est affectée par l'observation d'images de femmes au corps mince ou au corps plantureux. On a présenté à des étudiantes de premier cycle, âgées de 19 à 26 ans, de l'Université Saint Mary's de Calgary, au Canada, trois dessins de femmes au corps mince (N = 24) ou trois dessins de femmes au corps plantureux (N = 24). À l'aide d'une échelle de Likert de 1 à 5 (de « pas du tout attirant » à « extrêmement attirant »), les participantes ont évalué chaque dessin en fonction de sa beauté et ont ensuite rempli les dimensions de l'estime de soi sur le plan social et sur le plan de l'apparence de la State Self-Esteem Scale (SSES). Aucun effet significatif n'a été observé entre l'observation de dessins de femmes minces et l'estime de soi situationnelle; toutefois, l'image de la femme la plus mince a été, dans une proportion importante, jugée moins attirante que toutes les autres images. Les chercheurs devraient tenter d'établir si les perceptions des

femmes quant aux types de corps acceptables sont en train de changer et de délaisser l'idéal de minceur véhiculé dans la société occidentale.



The development of the thin ideal in Western society is taking a physical and psychological toll on young girls and women. In the mid-1970s, the media began increasing the frequency of exposure to slender cover girls, whom women and young girls have been pressured to resemble (Foley-Sypeck, Gray, & Ahrens, 2003). It has been argued that female figures exposed in magazines and on billboards are unrealistic; they are created by technology and are rare to see unphotoshopped in Western society (Jhally, Kilbourne, & Rabinovitz, 2010). These female figures are typically very thin with long limbs and large breasts, a body type that many women perceive as "ideal", even though only 5% of women develop this body type naturally (Jhally, Kilbourne, & Rabinovitz, 2000). For example, the average woman is 140 pounds at 5'4" with a normal body mass index (BMI) of 24.0, whereas the average female model is approximately 120 pounds at 5'11" with a BMI of 16.7, which is classified as underweight (Holmstrom, 2004; Canadian Guide for Body Weight Classification in Adults, 2003). The attempt to attain the "ideal" body type creates anxiety in females because the media characterizes weight and appearance as easy to alter, when it may be easier said than done (Strahan, Wilson, Cressman, & Buote, 2006). As a result, women are left feeling ashamed of their bodies because they cannot live up to society's unrealistic expectations (Jhally, Kilbourne, and Rabinovitz, 2000). Moreover, placing value on these unrealistic expectations increases the likelihood of body image disturbances and eating pathology in women and young girls (Foley-Sypeck, Gray, & Ahrens, 2003).

Sociocultural theory as defined by Vygotsky (1978) asserts that individual learning and development is strongly influenced by one's environment and culture ("Sociocultural perspective", n.d.). Strahan et al. (2008) asserted that the idea that women must be extremely slender to be attractive comes largely from mass media, which is considered a powerful and uni-

versal social influence (Harper & Tiggemann, 2008). In Western society, fashion magazines are notorious for introducing and advocating for the thin ideal which has been associated with widespread body dissatisfaction (Forbes, Doroszewicz,

Card, & Adams-Curtis, 2004). For example, Strahan et al. (2006) found that women reported feeling bad about themselves after viewing a very attractive female model. Bessenoff (2006) found that female undergraduate students exposed to thin ideal images exhibited an increase in negative mood, lowered self-esteem, and higher body dissatisfaction. Engeln-Maddox (2005) reported that women with straighter, tube-like physiques are becoming increasingly socially rewarded due to the media's depiction of the thin ideal as the most appealing body type, and exposure to thin tube-shaped female physiques has been associated with adverse effects such as anxiety and depression (Monro & Huon, 2005; Strahan et al., 2006). In addition, Harper and Tiggemann (2008) indicated that women who viewed thin ideal images reported an increase in weight and appearance-related anxiety and self-objectification, as well as a decrease in intrinsic motivation and self-efficacy. Furthermore, Klaczynski, Goold, and

Mudry (2004) found that girls and women who perceived themselves as failing to achieve standards of the thin ideal reported feeling weak and insufficiently skilled and motivated with regards to maintaining these unrealistic expectations. In fact, between 1997 to 2007, the number of cosmetic procedures performed on people rose by an astonishing 457%; and just over 90% of these people were women (Jhally, Kilbourne, and Rabinovitz, 2000). Despite these efforts, women are more likely (than men) to be unhappy with their bodies for most of their lives (Feingold & Mazzella, 1998). For instance, research indicates that 85-90% of women report being dissatisfied with their body type (Strahan et al., 2008), even though 44% of women aged 18 to 79 years old report a normal BMI (Statistics Canada, 2011). As such, women of normal height and weight may be negatively impacted by thin ideal images because they believe that they fall short of impractical societal standards, leading to decreased self-esteem and body satisfaction, negative self-perception, and ultimately, a large self-image discrepancy (Smeesters & Mandel, 2006; Bessenoff, 2006). Furthermore, young girls and women may fail to acknowledge the negative health consequences associated



Figure 1. Thinnest female body.

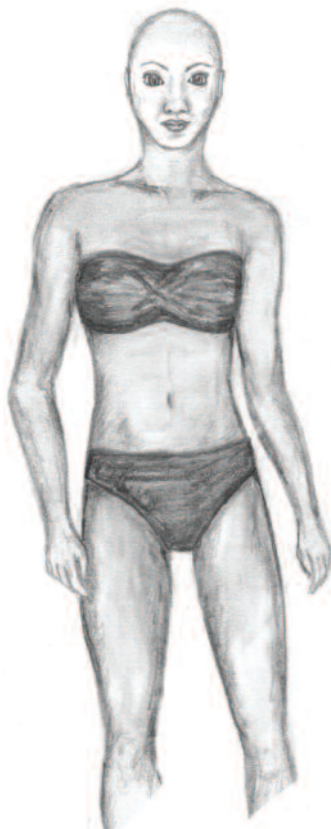


Figure 2. Thin female body.

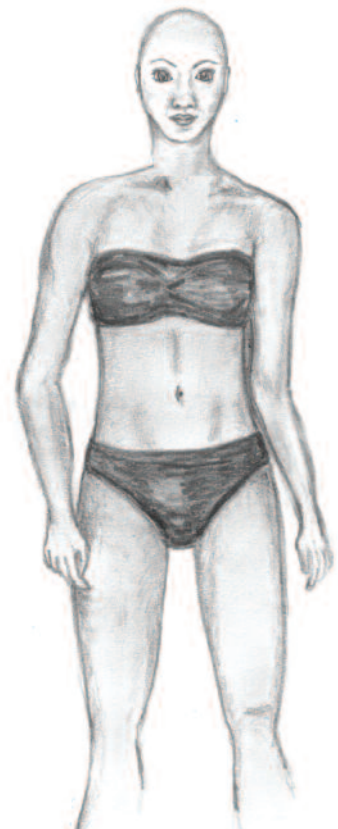


Figure 3. Least thin female body.

with being underweight, such as osteoporosis and early death (Canadian Guide for Body Weight Classification in Adults, 2003). Therefore, if this unrealistically thin body type is in fact prevailing in Western society, it is not surprising that research shows both males and females rate underweight models as more attractive than normal and overweight models (Puhl & Boland, 2001; Wilson, Tripp, & Boland, 2005). By contrast, some research indicates that not all women are equally affected by the media's influence regarding the thin ideal (Darlow & Lobel, 2010). For example, Holmstrom (2004) found that exposing women to slender figures had little to no effect on their body image. Bessenoff (2006) reported that related studies have shown either no relationship or inconsistent findings between thin ideal exposure and a negative body image. Furthermore, Tsai and Chang (2004) found that highly attractive models were less effective than normally attractive models in advertisements, and Sohn and Youn (2011) reported that using average-sized models was no more effective than using thin models in advertisements.

Festinger's theory of social comparison (1954) indicates that humans are inclined to take part in social comparison with others to decide how and where we

fit into society. Bessenoff (2006) defined thin ideal internalization as approval of, or strong agreement with, societal standards of slenderness. Therefore, in order for a person to be actively influenced by the thin ideal, two conditions must be met; first, the person must acknowledge that the thin ideal exists, and second, they must integrate the thin ideal concept into the schema they use when making judgements about themselves and other people (Forbes et al., 2004). This has implications for the way women perceive their actual selves in comparison to their ideal selves because this perception can change with exposure to thin ideal images (Holmstrom, 2004). Jung and Lee (2006) reported that the degree to which women value specific appearance-management practices varies depending on culture, but in general, collectivist cultures tend to value non-Western concepts, whereas individualistic cultures favor Western concepts such as the thin ideal (Markus & Kitayama, 1991). Triandis (1989) reported that collectivist cultures tend to favor interpersonal relationships and equality, whereas women in individualistic cultures place significant emphasis on social recognition and competitive triumphs. This creates tension between women in Western society because

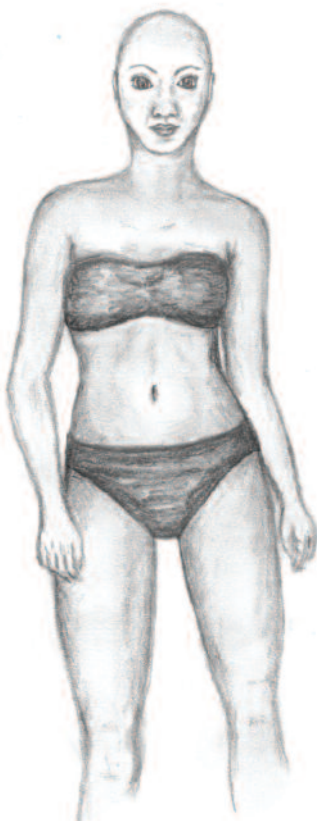


Figure 4. Least curvy female body.



Figure 5. Curvy female body.

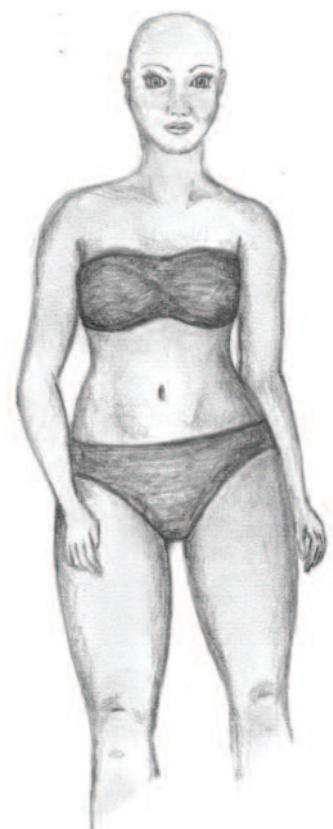


Figure 6. Most curvy female body.



they feel pressured to attain optimal thin features such as the largest breasts, the skinniest waist, and the blondest hair (Klaczynski, Gool, & Mudry, 2004; Grabe, Ward, & Hyde, 2008). Thus, if these unrealistic social comparison processes are active amongst young girls and women, this discrepancy may lead to feelings of anxiety, depression, lowered self-esteem and image (Monro & Huon, 2005; Strahan et al., 2006; Smeesters & Mandel, 2006; Bessenoff, 2006).

One feature of this research that requires more attention is the *immediacy* of these negative effects. If thin ideal images are universally persuasive in Western society, then a change in self-esteem should be evident immediately after exposure to these unrealistic images. According to Kinnally and Van Vonderen (2012), *indirect* exposure to media figures is strongly associated with self-esteem and peer perceptions. Furthermore, socioenvironmental aspects, peer perceptions, and self-esteem were the strongest factors associated with body dissatisfaction. This is a cause for concern for psychologists because body dissatisfaction increases the risk of developing eating disorders and body image disruptions in girls and women (Stice & Shaw, 2002). Therefore, if these negative perceptions can be produced upon *direct* exposure to thin ideal images, this may provide further information about the cognitive processes that are at play during females' instant exposure to thin ideal images. The current study sought to explore the effects of thin images on women's *state* self-esteem, suggesting that participants who viewed and immediately rated thin images would produce lower state self-esteem scores than those who viewed and rated curvy images. It was also hypothesized that the group of thin images would receive significantly higher appeal ratings than the group of curvy images.

## Method

### Participants

Forty-eight female undergraduate students aged 19 to 26 years ( $M = 20.9$ ,  $SD = 4.8$ ) were randomly recruited from St. Mary's University in Calgary, Canada to take part in a study about women and body image. Information pertaining to ethnicity and cultural background were not collected.

### Materials

**Visual Stimuli.** Six greyscale drawings of female bodies were composed by Dr. Kristin de Lima, TCMD, R.Ac in Calgary, Canada. Dr. de Lima was shown one real-life image of a woman with a "boxy" body type

and one real-life image of a woman with defined hips and curves. Dr. de Lima was asked to draw three variations of each body type, and each figure was labeled according to the amount of fat each body exhibited. The drawings differed only from the waist down, and were rated on appeal using a Likert scale from 1 to 5 (not at all to extremely appealing).

***The social and appearance self-esteem dimensions of the State Self-Esteem Scale*** (SSES; Heatherton & Polivy, 1991). The SSES is used to measure self-esteem at a certain point in time. This 20-item scale has been shown to be a reliable and valid measure of changes in self-esteem shortly after exposure to research manipulations (Heatherton & Polivy, 1991). The items are split into three categories of self-esteem; social, appearance, and performance. The social subscale measures public self-awareness; the appearance subscale gauges judgement of body size evaluation and physical appearance; and the performance subscale measures global self-esteem, trait anxiety, and depression (Daley, Jimerson, Heatherton, Metzger, & Wolfe, 2008). The items measuring performance self-esteem were omitted and replaced with filler questions because they did not measure characteristics that could be immediately quantified. Participant scores were obtained by summing all items (13 items were reverse-scored). Lower scores indicate lower state self-esteem, whereas higher scores reflect higher state self-esteem (Daley et al., 2008).

### Procedure

Participants were randomly recruited in the foyer of St. Mary's University in Calgary, Canada and asked if they would like to take part in a research study on women and body image. Participants were also recruited from two random lectures at St. Mary's University with the permission of two university professors. Upon receipt of verbal and written informed consent, each participant was randomly assigned a booklet containing two measures; 1) three greyscale drawings of thin or curvy images, and 2) the State Self-Esteem Scale questionnaire, which was renamed to The Personal State Questionnaire in order to minimize response bias. Participants were instructed to complete the booklet individually and in the order it was presented. It took participants approximately 10 minutes to complete the booklet. Upon completion, participants were asked to look at 12 color pictures of cute animals to promote feelings of happiness and wellbeing after completing mea-



asures associated with personal thoughts and self-esteem. Once completed, participants were given three sheets; 1) a copy of their written informed consent, 2) a formal written debriefing sheet and, 3) a list of local medical and psychological services should they wish to seek such services. Participants were thanked for their participation and did not receive any reimbursement.

## Results

It was hypothesized that participants who viewed thin images would score lower on the SSES than those who viewed curvy images. An independent  $t$  test was conducted to compare state self-esteem in the thin and curvy image conditions. There was no significant difference in scores for thin ( $M = 44.208$ ,  $SD = 8.753$ ) and curvy ( $M = 45.625$ ,  $SD = 8.203$ ) images on state self-esteem ( $p = .543$ ).

It was also hypothesized that the group of the three thin images would receive the highest appeal ratings by participants. A  $2 \times 3$  repeated measures ANOVA was conducted to compare the effect of appeal ratings on body type. There was no significant difference of appeal ratings (Wilks' Lambda = .603,  $F(2,45) = 14.796$ ,  $p = .000$ ). However, there was a significant interaction for body type  $F(1,46) = 11.836$ ;  $p < .001$ . Post-hoc analyses found that the thinnest image ( $M = 2.083$ ,  $SD = .881$ ) was rated significantly less appealing than the thin ( $M = 3.833$ ,  $SD = .761$ ), least thin ( $M = 3.500$ ,  $SD = .933$ ), least curvy ( $M = 3.708$ ,  $SD = .908$ ), curvy ( $M = 3.375$ ,  $SD = 1.014$ ), and most curvy images ( $M = 3.750$ ,  $SD = .847$ ).

## Discussion

The results of this study were inconsistent with previous research showing that thin images had a significant effect on women's self-esteem. Past literature noted that not all women are equally affected by thin ideal images (Darlow & Lobel, 2010), and the degree to which women are affected has to do with various factors that were not accounted for in this study (e.g. internalization level, degree of body dissatisfaction). However, this study was consistent with previous literature in that, greyscale drawings were not as effective in engaging participants as real-life images of female physiques. Moreover, implementing a free-response technique in this study to measure the personal outcomes of social comparison may have yielded more significant responses because a free-response measure allows participants to elaborate on their cognitions during exposure to thin ideal images (Smeesters & Mandel, 2006). There was a significant interaction

effect of body type in the current study where the *thinnest* image was rated significantly and consistently as *not at all appealing*. This finding was contrary to the second hypothesis, which stated that the thin images would be rated significantly more appealing than the curvy images. Participants rated the remaining 5 images as *somewhat appealing*, meaning that they either did not internalize the images or they were unsure how to cognitively rate the greyscale stimuli. Given that the thinnest image was rated as the least appealing, participants may have perceived the image as an unattractive or emaciated female.

There were a couple of limitations in this study. First, the participants were all female undergraduate students from the same university aged 19 to 26 years old. Future researchers should include male and adolescent participants in order to expand the generalizability of this research, which may provide further information regarding self-perceptions of the human body. Secondly, the use of greyscale stimuli in this study likely contributed as a confounding factor because there was likely a strong dissimilarity between participants and the stimuli they were rating. As such, future researchers should use real-life images of male and female bodies to intensify the perceived connection between participants and stimuli. By doing so, they may increase the authenticity of participant responses, which would ultimately strengthen the study's results.

If mass media in individualistic cultures continues to endorse the thin ideal body type as the most attractive, this unrealistically thin figure will surely continue to be desirable to young girls and women in Western society. Thus far, the research on this topic has produced mixed results in terms of physical and psychological effects on females. Whereas thin ideals images had little to no effect on some female observers, and images of overweight women had a significant positive effect on female body image (Holmstrom, 2004), the current study found that the thinnest image was rated as the least attractive by female participants. Therefore, an alternate explanation for this finding could be that women's perceptions of acceptable body types are shifting away from the thin ideal. Future researchers should attempt to establish if thin ideal perceptions are being replaced with more realistic body types.

# Shifting from the Current Model of Diagnosis and Treatment of ADHD to a Strength-based Approach

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## Abstract

Attention-Deficit Hyperactivity Disorder (ADHD) is a neurological disorder that affects an estimated 5-10% of school-aged children. The focus on deficits during diagnosis of ADHD can lead to negative connotations to the ADHD label, both for the child being diagnosed and those who interact with that child. Further, interventions for ADHD often include medication and/or behavioural management techniques, both of which can neglect the social-emotional domains of the child and have limited evidence of long-term effectiveness. As such, positive psychologists are calling for the inclusion of the strength-based approach to the diagnosis and treatment of ADHD. Recognition of strengths, resilience, and protective factors of the child with ADHD is important during both diagnosis and when considering treatment options of for the child. The strength-based approach can reframe what it means to have ADHD and re-conceptualize how clinicians diagnose and support children with ADHD symptoms.

## Résumé

Le trouble déficitaire de l'attention avec hyperactivité (TDAH) est un trouble neurologique qui, d'après les estimations, toucherait de 5 % à 10 % des enfants d'âge scolaire. L'accent mis sur les déficits pendant le diagnostic de TDAH est souvent porteur d'une connotation négative associée à l'étiquette de TDAH, qui risque de faire souffrir tant l'enfant qui a reçu le diagnostic que les personnes qui interagissent avec lui. De plus, les interventions utilisées pour traiter le TDAH font souvent appel à la médication ou à des techniques de gestion du comportement, dont l'efficacité à long terme est peu prouvée et qui, dans plusieurs cas, négligent les capacités socio-émotionnelles de l'enfant. À ce titre, les psychologues qui utilisent l'approche de la psychologie

positive réclament l'inclusion de l'approche fondée sur les forces pour diagnostiquer et traiter le TDAH. La reconnaissance des points forts, de la résilience et des facteurs de protection de l'enfant atteint du TDAH est importante pendant le diagnostic et lorsque vient le temps d'examiner les possibilités de traitement. L'approche fondée sur les forces est à même de recadrer ce que signifie d'avoir le TDAH et de reconceptualiser la manière dont les cliniciens diagnostiquent et aident les enfants qui présentent les symptômes du TDAH.



Attention-Deficit Hyperactivity Disorder (ADHD) is a neurological disorder that has continuous and substantial impacts on individuals throughout their lifespan. It is common among children and adolescents, affecting an estimated 5-11% of school-aged children worldwide with the majority of symptoms often persisting into adulthood (Centers for Disease Control and Prevention, 2016; Polanczyk, de Lima, Horta, Biederman, & Rohde, 2007; Turgay et al., 2012). ADHD is characterized by symptoms of inattention, hyperactivity, and impulsivity. These symptoms can lead to functional impairments in academic, emotional, and social domains thereby putting individuals with ADHD at risk for negative outcomes such as school failure, relationship problems, substance abuse and engaging in risky behaviours (Barkley, Fischer, Smallish, & Fletcher, 2006; Bunford, Evans, Becker, & Langberg, 2015; Frazier, Youngstrom, Glutting, & Watkins, 2007; Kessler, 2006; Molina & Pelham, 2003). Later life outcomes are also often impacted by these symptoms and consequential negative outcomes; for example, being an adult with ADHD has been associated with poor work performance, unemployment, divorce, debt, and higher comorbidity of psychiatric disorders than those without ADHD (Barkley, Fischer, Smallish, & Fletcher, 2006; Kessler, 2006). As the underlying causes of this disorder are biological in nature, the current paradigm

informing ADHD diagnosis and treatment is based on the medical model. Biological underpinnings of ADHD manifest to impact psychosocial domains; therefore, proponents of positive psychology, the scientific study of strengths enabling individuals to thrive, are calling for a paradigm shift in how ADHD is viewed and advocating for a strength-based approach to this disorder (Climie & Mastoras, 2015).

### Diagnosis of ADHD

Traditionally, ADHD is diagnosed by identifying the presence and severity of symptoms. *The Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-5; American Psychiatric Association, 2013) is often used during the diagnostic process, focusing on the deficits and maladaptive functioning of the child (Wolraich et al., 2011). This approach to diagnosing ADHD is pathology-focused which can be problematic since attention is mainly drawn to the child's disorder and deficits, with limited focus on their positive characteristics (Climie & Mastoras, 2015). This limited focus on the strengths and abilities of the child makes the pathology-focused paradigm of diagnosis inherently disempowering, possibly leaving the child feeling vulnerable (Mather, 2012). When their symptoms are framed in a negative way, a child with ADHD may come to perceive their personal characteristics as bad, and believe their worth is defined by their deficits (Mather, 2012). Their family can also be impacted by this paradigm of diagnosis, leaving them feeling helpless and/or eliciting negative reactions towards the child (Mather, 2012; McIntyre & Hennessy, 2012; Steiner, 2011). Research has found that parents displayed a more negative affect towards their child when the focus during diagnosis was on deficits rather than on the child's strengths or potential (Steiner, 2011). In addition, within western society there are negative connotations and stigma associated with an ADHD diagnosis under the current paradigm. Parents of children with ADHD have reported that they encountered prejudice and discrimination as a result of having a child with ADHD, which they perceived was a result of society's misunderstanding of ADHD and its current pathology-focused conceptualization (McIntyre & Hennessy, 2012).

Given its focus on pathology, proponents of positive psychology argue that the current method used to diagnose ADHD is limited and fails to capture the positive attributes and potential of the child (Climie & Mastoras, 2015). These researchers assert that a strength-based approach is needed to re-conceptual-

ize what it means to be diagnosed with ADHD, a lifespan disorder with no "quick fix". Compared to the traditional, pathology-focused approach to diagnosis, the strength-based approach promotes a more comprehensive assessment, identifying areas of strength, resilience, and protective factors that will help children to cope and develop skills, in addition to identifying the areas in which they are struggling (Climie & Mastoras, 2015; Portrie-Bethke, Hill, & Bethke, 2009; Rawana & Brownlee, 2009; Rhee, Furlong, Turner, & Harari, 2001). Strengths are skills, competencies, and characteristics of the child that can promote growth and development allowing them to thrive. These attributes can be identified in many different domains, including cognitive, academic, and social-emotional functioning, and can serve to support the child with ADHD in their areas of difficulty. For example, researchers have found that academic buoyancy, the ability to overcome setbacks and challenges in the ordinary course of everyday academic life, is a characteristic found in students with ADHD and is associated with better academic achievement by these students when compared to their typical peers (Martin, 2014). Protective factors have been identified that can build resilience in children with ADHD and help them to "overcome the odds" (Rhee et al., 2001). For example, research has found that children diagnosed with ADHD who perceive that they are competent and socially accepted have better academic and emotional outcomes, such as less depressive symptoms and higher achievement in school (Dvorsky, Langberg, Evans, & Becker, 2016; McQuade, Hoza, Murray-Close, Waschbusch, & Owens, 2011). During diagnosis, there are many ways to identify areas of strength and protective factors including: standardized measures like the Woodcock-Johnson, Fourth Edition, Tests of Cognitive Abilities; rating scales such as the Behavioral and Emotional Rating Scale, Second Edition; or interview questions designed to obtain information about all areas of the child (Epstein & Sharma, 1998; Rawana & Brownlee, 2009; Schrank, McGrew, Mather, 2014). This positive psychology approach is a more holistic way of perceiving ADHD and does not seek to deny or ignore difficulties experienced by diagnosed children. Instead, this approach recognizes that the way in which ADHD is diagnosed often leads to interventions that may be inadequate in meeting the diverse needs of this population (Climie & Mastoras, 2015). The strength-based approach seeks to shift the way in which diagnosis, treatment, and research for ADHD is conducted, both to empower these chil-

dren and help them build their resilience and coping skills to achieve success in the future.

It has been found that the strength-based approach has positive effects on the child's parents and the overall parent-child relationship (Steiner, 2011). When the practitioner emphasized the child's strengths and potential rather than their weaknesses and areas for improvement, parent affect was enhanced and the amount of positive statements made by the parents about their child were increased (Steiner, 2011). Critics argue that the strength-based approach to diagnosis is more time-consuming and thus more costly but advocates assert that this is time well spent as a more comprehensive assessment can lead to more tailored interventions, which are much more likely to be successful (Climie & Mastoras, 2015; Rhee et al., 2001). In addition, the financial resources spent on comprehensive assessments and interventions to support children with ADHD will encourage those children to use their strengths and empower more positive thinking and interactions with others (Mather, 2012). As suggested by Smith (2006), society "wastes human potential and incurs financial losses when it fails to develop the assets of its youth" (p.15). The use of the strength-based approach may remedy these unfortunate consequences often stemming from the diagnosis of this disorder as suggested by the current prognosis for those with ADHD.

### **Interventions for ADHD**

Traditionally, interventions for ADHD include medical interventions, primarily pharmacological treatments, and behavioural management interventions. Though pharmacological treatments have been found to be effective for short-term reduction of symptomatology, these medications do not address the latent complex issues elicited by the presence of symptoms, such as those in social and emotional domains (Climie & Mastoras, 2015; Jensen, 2007). Initial severity of symptoms, comorbid conduct problems, intelligence, and social advantage play a large role in prognosis in the later years of a child's life, regardless of engagement in pharmacological interventions (Molina & MTA Cooperative Group, 2009). This points to a need to identify interventions that address all domains of the child's life.

Behavioural management approaches are also used to intervene and have been found to be effective in reducing hyperactivity and improving attention among children diagnosed with ADHD (Lessing &

Wulfsohn, 2015; Pfiffner & Haack, 2014). However, these interventions can negatively impact the child as they emphasize what the child cannot do rather than what they can do, and further, if the child is unable to achieve the goals of the intervention, feelings of frustration are increased for that child (Climie & Mastoras, 2015; Pfiffner & Haack, 2014). Additionally, past research has shown that external rewards do not elicit intrinsic, long-lasting behavioural changes; in fact, it has been found that external rewards are detrimental in that they diminish intrinsic motivation in the future (Deci, Koestner, & Ryan, 1999). Behaviour management techniques are useful in managing the behaviour of children with ADHD, but as with medication, they seem to merely offer a temporary solution and do not address all of the challenges engendered by the disorder.

A strength-based approach to interventions for ADHD emphasizes ways in which characteristics of this disorder might be a child's strengths, rather than weaknesses. As stated by one of the founders of positive psychology and former American Psychological Association president, Martin Seligman (1998): "Treatment is not just fixing what is broken; it is nurturing what is best within ourselves" (p. 2). For example, children with ADHD have been found to have positive characteristics such as higher levels of creativity, thus generating more original and unique responses than their typically achieving peers, as well as high energy and attention-seeking, which can be used to complete tasks and have effective interactions (Abraham, Windmann, Siefen, Daum, & Güntürkün, 2006; Portrie-Bethke et al., 2009). Furthermore, the impulsivity that is displayed in children with ADHD can be indicative of cognitive engagement in classrooms (Tymms & Merrell, 2011). Indeed, Tymms and Merrell (2011) have found that the impulsivity displayed by students with ADHD was associated with higher academic achievement. In fact, three criteria from DSM-5 (American Psychiatric Association, 2013) that are used for diagnosis of ADHD (i.e., 1. Blurts out an answer before a question has been completed; 2. Has difficulty waiting his or her turn; 3. Interrupts or intrudes on others, e.g., pushes into conversations or games), implying the dysfunctional nature of these characteristics, were associated with higher academic attainment (Tymms & Merrell, 2011). As such, it is important to consider how characteristics of those with ADHD can be advantageous and harnessed into strengths that support adaptive-functioning.





## Future Directions

The strength-based approach is an innovative way of diagnosing and intervening on children with ADHD, but this perspective is still within the preliminary stages of development and empirical support. Future directions include identifying common areas of strength of children with ADHD to understand how they can cope and how to best support them (Climie & Mastoras, 2015). Furthermore, understanding which protective factors promote the best possible outcomes for these children is also important (Climie & Mastoras, 2015). The strength-based approach requires a reconceptualization in how ADHD is diagnosed and treated, which will require that it be translated into practical and useful guidelines and tools that can be used by clinicians and within schools (Mather, 2012). To successfully utilize this approach, additional training and/or changes to clinicians' practices may be necessary. However, to date, there has been limited research conducted on strength-based approaches. Thus, to ensure the approach is being used to its maximum potential, more research is needed to understand how to utilize it in the treatment of children with ADHD, as well as to understand its long-term impact (Climie & Mastoras, 2015; Steiner, 2011).

## Conclusion

Advocates for a strength-based approach do not deny the usefulness of understanding an individual's deficits and using proven interventions to support them. They assert, however, that there also needs to be a focus on the individual's strengths and the resources available to them. Instead of focusing solely on how underlying differences between typically developing children and children with ADHD are limiting, it is important for prognosis and intervention planning to understand ways in which these characteristics make children with ADHD unique and enable them to contribute to society in ways that their typically achieving peers may not. Focusing on strengths gives these children a unique advantage and using their strengths to compensate for their weaknesses can build resilience and foster better overall outcomes. The strength-based approach can work with the current model of diagnosis and treatment of ADHD through reframing of what it means to have the disorder and re-conceptualizing how we can support diagnosed individuals.

## References

- Abraham, A., Windmann, S., Siefen, R., Daum, I., & Güntürkün, O. (2006). Creative thinking in adolescents with attention deficit hyperactivity disorder (ADHD). *Child Neuropsychology*, 12, 111-123. doi:10.1080/09297040500320691
- American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Barkley, R. A., Fischer, M., Smallish, L., & Fletcher, K. (2006). Young adult outcome of hyperactive children: Adaptive functioning in major life activities. *Journal of the American Academy of Child & Adolescent Psychiatry*, 45, 192-202. doi:10.1097/01.chi.0000189134.97436.e2
- Bunford, N., Evans, S. W., Becker, S. P., & Langberg, J. M. (2015). Attention-deficit/hyperactivity disorder and social skills in youth: A moderated mediation model of emotion dysregulation and depression. *Journal of Abnormal Child Psychology*, 43, 283-296. doi:10.1007/s10802-014-9909-2
- Centers for Disease Control and Prevention (2016). *Attention-Deficit / Hyperactivity Disorder (ADHD)*. Retrieved from <http://www.cdc.gov/ncbddd/adhd/data.html>
- Climie, E. A., & Mastoras, S. M. (2015). ADHD in schools: Adopting a strengths-based perspective. *Canadian Psychology*, 56, 295-300. doi:10.1037/cap0000030
- Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125, 627-668. doi:10.1037/0033-2909.125.6.627
- Dvorsky, M.R., Langberg, J.M., Evans, S. W., & Becker, S. P. (2016). The protective effects of social factors on the academic functioning of adolescents with ADHD. *Journal of Clinical Child & Adolescent Psychology*. Advance online publication. doi:10.1080/15374416.2016.1138406
- Epstein, M. H., & Sharma, J. (1998). Behavioral and Emotional Rating Scale: A strength-based approach to assessment. Austin, TX: PRO-ED.
- Frazier, T. W., Youngstrom, E. A., Glutting, J. J., & Watkins, M. W. (2007). ADHD and achievement: Meta-analysis of the child, adolescent, and adult literatures and a concomitant study with college students. *Journal of Learning Disabilities*, 40, 49-65. doi:10.1177/00222194070400010401
- Jensen, P. (2007). 3-year follow-up of the NIMH MTA study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46, 989-1002. doi:10.1097/CHI.0b013e3180686d48
- Kessler, R. C., Adler, L., Barkley, R., Biederman, J., Conners, C. K., Demler, O., & Zaslavsky, A. M. (2006). The prevalence and correlates of adult ADHD in the United States: Results from the national comorbidity survey replication. *The American Journal of Psychiatry*, 163,

- 716-723. doi:10.1176/ajp.2006.163.4.716
- Lessing, A. C., & Wulfsohn, R. (2015). The potential of behaviour management strategies to support learners with attention deficit hyperactivity disorder in the classroom. *Education as Change*, 19, 54-77. doi:10.1080/16823206.2015.1024146
- Mather, B. A. (2012). The social construction and reframing of attention-deficit/hyperactivity disorder. *Ethical Human Psychology and Psychiatry*, 14, 15-26. doi:10.1891/1559-4343.14.1.15
- Martin, A. J. (2014). Academic buoyancy and academic outcomes: Towards a further understanding of students with attention-deficit/hyperactivity disorder (ADHD), students without ADHD, and academic buoyancy itself. *British Journal of Educational Psychology*, 84, 86-107. doi:10.1111/bjep.12007
- McIntyre, R., & Hennessy, E. (2012). 'He's just enthusiastic. Is that such a bad thing?' Experiences of parents of children with attention deficit hyperactivity disorder. *Emotional and Behavioural Difficulties*, 17, 65-82. doi:10.1080/13632752.2012.652428
- McQuade, J. D., Hoza, B., Murray-Close, D., Waschbusch, D. A., & Owens, J. S. (2011). Changes in self-perceptions in children with ADHD: A longitudinal study of depressive symptoms and attributional style. *Behavior Therapy*, 42, 170-182. doi:10.1016/j.beth.2010.05.003
- Molina, B. S. G., & Pelham, W. E. (2003). Childhood predictors of adolescent substance use in a longitudinal study of children with ADHD. *Journal of Abnormal Psychology*, 112, 497-507. doi:10.1037/0021-843X.112.3.497
- Molina, B., & MTA Cooperative Group. (2009). The MTA at 8 years: Prospective follow-up of children treated for combined-type ADHD in a multisite study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 48, 484-500. doi:10.1097/CHI.0b013e31819c23d0
- Pfiffner, L. J., & Haack, L. M. (2014). Behavior management for school-aged children with ADHD. *Child and Adolescent Psychiatric Clinics of North America*, 23, 731-746. doi:10.1016/j.chc.2014.05.014
- Polanczyk, G., de Lima, M. S., Horta, B. L., Biederman, J., & Rohde, L. A. (2007). The worldwide prevalence of ADHD: A systematic review and meta-regression analysis. *The American Journal of Psychiatry*, 164, 942-948. doi:10.1176/ajp.2007.164.6.942
- Portrie-Bethke, T., Hill, N., & Bethke, J. (2009). Strength-based mental health counseling for children with ADHD: An integrative model of adventure-based counseling and Adlerian play therapy. *Journal of Mental Health Counseling*, 31, 323-337. doi:10.17744/mehc.31.4.908822151555
- Rawana, E., & Brownlee, K. (2009). Making the possible probable: A strength-based assessment and intervention framework for clinical work with parents, children, and adolescents. *Families in Society*, 90, 255-260. doi:10.1606/1044-3894.3900
- Rhee, S., Furlong, M. J., Turner, J. A., & Harari, I. (2001). Integrating strength-based perspectives in psychoeducational evaluations. *California School Psychologist*, 65-17. doi:10.1007/BF03340879
- Schrank, F. A., McGrew, K. S., Mather, N. (2014). Woodcock-Johnson IV Tests of Cognitive Abilities. Itasca, IL: Houghton Mifflin Harcourt.
- Seligman, M. E. (1998). Building human strength: Psychology's forgotten missions. *American Psychological Association Monitor on Psychology*, 29, 2. Retrieved from <http://www.apa.org/monitor/>
- Smith, E. J. (2006). The strength-based counseling model. *The Counseling Psychologist*, 34, 13-79. doi:10.1177/0011000005277018
- Steiner, A. M. (2011). A strength-based approach to parent education for children with autism. *Journal of Positive Behavior Interventions*, 13, 178-190. doi:10.1177/1098300710384134
- Turgay, A., Goodman, D. W., Asherson, P., Lasser, R. A., Babcock, T. F., Pucci, M. L., & Barkley, R. (2012). Lifespan persistence of ADHD: The life transition model and its application. *The Journal of Clinical Psychiatry*, 73, 192-201. doi:10.4088/JCP.10m06628
- Tymms, P., & Merrell, C. (2011). ADHD and academic attainment: Is there an advantage in impulsivity? *Learning and Individual Differences*, 21, 753-758. doi:10.1016/j.lindif.2011.07.014
- Wolraich, M., Brown, L., Brown, R. T., DuPaul, G., Earls, M., & Feldman, H. M. (2011). ADHD: Clinical practice guideline for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity disorder in children and adolescents. *Pediatrics*, 128, 1007-1022. doi:10.1542/peds.2011-2654

# The Effects of Interviewer Rapport on Children's Memory Recall During Forensic Interviewing

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## Abstract

At times children must be interviewed about events they personally experienced or witnessed. Rapport building with the interviewer has been shown to facilitate accuracy and self-disclosure of information. Rapport is the establishment of a mutual, comfortable, caring relationship. Interviewers use specific verbal and nonverbal behaviours in order to build rapport with children. Commonly used interview practices (e.g., protocols, rapport-building techniques) and future directions are discussed.

## Résumé

Parfois, les enfants doivent être interrogés sur des événements qu'ils ont vécus personnellement ou dont ils ont été témoins. Il a été démontré que l'établissement d'une relation de confiance avec la personne qui interroge l'enfant améliore l'exactitude du témoignage et facilite l'autodivulgence de l'information. La relation de confiance est le résultat d'une relation mutuelle, empreinte de bienveillance, et dans laquelle on se sent à l'aise. La personne qui interroge a recours à des comportements verbaux et non verbaux particuliers pour créer une relation de confiance avec l'enfant. Les pratiques d'interrogatoire les plus utilisées (p. ex., protocoles, techniques d'établissement d'une relation de confiance) et les orientations futures sont examinées.



Obtaining accurate child testimonies is often a key component of abuse and criminal cases where a child is the eyewitness. To facilitate the memory recall of children, rapport is frequently established between the interviewer and child prior to the interview of the event. Establishing rapport may make children feel more comfortable disclosing their experiences to interviewers. However, it is not guaranteed that what they recall in their testimonies will be accurate. Sug-

gestibility is the extent to which one's belief in information provided during social interactions is influenced by cues that are presented (e.g., phrasing, assumptions, type of question asked). Children suspected of abuse and neglect have been found to be more suggestible than children without abuse or neglect concerns (Eisen, Goodman, Qin, Davis, & Crayton, 2007). Accurately recalling specific details about events assists interviewers and the criminal system solve cases and protect children. However, accuracy of information may be compromised by suggestibility during interviewing. Strategies that enhance children's disclosure and accuracy of information (e.g., rapport building) are greatly needed for these reasons. Research on cognitive abilities has been used to create interview protocols by which children are interviewed. Many protocols require interviewers to build rapport with children prior to interviewing. The facilitative effects of building rapport with children prior to forensic interviewing, will be discussed further.

## Rapport

Rapport has been defined in numerous ways depending on the context it is being used in (Bernieri, 2005; Faranda & Clarke, 2004; Tickle-Degnen & Rosenthal, 1990). For this paper, rapport will be defined using the most cohesive description in relation to forensic interviewing. Specifically, when a forensic interviewer seeks to establish rapport with a child eyewitness, they are seeking to establish a trusting relationship where relevant information can be comfortably shared (Collins, Doherty-Sneddon, & Doherty, 2014).

Numerous verbal and nonverbal behaviours are associated with rapport building. Verbal behaviours that foster rapport include the use of emotion words, reflections, restatements, saying the child's name, welcoming them, empathizing with their feelings, and discussing topics of interest to them (Hershkowitz, Lamb, & Katz, 2014; Ruddock, 2006). Reflections are when interviewers reflect back the emotional state the child mentioned (e.g., "So you must have been feeling angry then"; Ruddock, 2006). Restatements are simply when interviewers repeat what the child said. Non-

verbal behaviours used to build rapport include head nods, eye contact, leaning towards the child, and smiling (Hershkowitz, Lamb, & Katz, 2014; Ruddock, 2006). Researchers have also found that smiling is positively associated with perceived rapport with children (Rotenberg et al., 2003). In a study by Rotenberg and colleagues (2003), adults read stories to preschool children while smiling for low or high frequencies. Children rated the trustworthiness and likeability of the adult greater when the frequency of smiling was higher. Children's impressions, based on their observations of others' verbal and nonverbal behaviours, can form in a brief amount of time.

It has been found that children as young as eight years old can accurately describe other children's personality traits after having viewed less than two minutes of their behaviour (McLarney-Vesotsky, Bernieri, & Rempala, 2006). This suggests that children may form accurate first impressions of the interviewer. If their first impression is negative, the interviewer may struggle to build rapport and make the child feel comfortable in the interview environment. Research by Gurland and Grolnick (2003) suggests that displaying warmth and interest may help interviewers establish a positive impression and rapport with the child. In this study they measured children's perceptions of interviewers. They found that children gave higher ratings of perceived rapport with the interviewer when encouragement and genuine interest are displayed. Overall, research findings suggest that children are able to form first impressions and recognize and respond to verbal and nonverbal behaviours commonly used to establish rapport in interviews.

### **Positive effects of Rapport in Interviewing Memory Recall**

As previously mentioned, rapport is a positive connection between the interviewer and the interviewee. Rapport between an interviewer and child has been associated with greater rates of self-disclosure of abuse in cases of suspected abuse (Hershkowitz, Lamb, & Katz, 2014; Ruddock, 2006), and greater accuracy in event recall (Almerigogna, Ost, Akehurst, & Fluck, 2008). Both of these elements contribute to provide a more thorough picture of events that occurred which can then assist professionals involved in criminal cases.

#### *Self-Disclosure*

It is required by law across Canada for professionals to report any suspected cases of child abuse to

the appropriate authorities (e.g., Queen's Printer, 1990; 2016). This is to ensure the child's safety and well-being. However, witnesses of abuse may be rare and research suggests that the majority of children who are abused will not self-disclose their maltreatment (London, Bruck, Ceci, & Shuman, 2005). Building rapport with children suspected of being abused prior to interviewing may make self-disclosure more comfortable and easier for them. In a study by Hershkowitz, Lamb, and Katz (2014), two interview protocols were compared to examine their effectiveness in facilitating over four hundred children's self-disclosure of abuse. The first interview protocol used was the National Institute of Child Health and Human Development Investigative Interview Standard Protocol (SP). It consists of an introductory phase (e.g., introductions, task instructions); rapport-building phase (e.g., open-ended personal questions, practice recalling a neutral event); and a transitional phase (e.g., open-ended prompts about the suspected abuse event that gradually become narrower and make references to known information such as physical injuries). The second interview protocol used was based on the SP but included verbal and nonverbal behaviours shown to build rapport. These included talking about topics that are of interest to the child, addressing the child by their name, welcoming them, empathizing with their feelings, leaning toward the child, smiling, and establishing eye contact. Additional evidence was provided that confirmed abuse had occurred so the validity of the children's disclosure was not in question. The researchers found that rates of self-disclosure of abuse allegations were increased by 18.8% when children were interviewed using the rapport enhanced protocol compared to children that were interviewed using the SP.

Similarly, Ruddock (2006) found that behaviours associated with rapport (e.g., use of emotion words, reflections, head nods, restatements, and eye contact) were associated with greater self-disclosure of sexual abuse by children. In particular, all of these behaviours were related to longer responses to questions in the interview. Furthermore, the use of emotion words and reflections by interviewers positively predicted greater details about the abuse that were disclosed by the child. From these studies, building rapport with children was found to be beneficial to interviewers. Specifically, greater self-disclosure of abuse was obtained when children experienced rapport with the interviewer than when children did not experience rapport.



### *Greater Accuracy*

Due to children's cognitive limitations, including rudimentary encoding and retrieval strategies, the accuracy of children's memories is sometimes questioned. Accurate reporting is important in the legal system because allegations of child abuse are not taken lightly. Rapport has been shown to elicit more accurate responses and fewer inaccurate responses from children during interviews. By building rapport with children, interviewers may be increasing the validity of the child's statements.

Researchers have found that children's accuracy in memory recall may be influenced by the characteristics of the interviewer. Almerigogna, Ost, Akehurst, and Fluck (2008) asked eight to ten year olds to recall events from a lab activity they participated in one week prior. They were asked to recall information from these events by either a supportive (friendly, smiling) interviewer or a nonsupportive (strict, fidgeting) interviewer. Information provided by the children that were interviewed by the nonsupportive interviewer had fewer accurate responses and more inaccurate responses than the responses children provided when interviewed by a supportive interviewer. Additionally, when asked if the interviewer had touched them in the lab activity, 19% of the children interviewed by the nonsupportive interviewer made false reports of being touched. This research suggests that nonsupportive interviewers may unknowingly be contributing to the amount of false child abuse allegations. It also suggests that children's memory recall accuracy may be improved by having a friendly, smiling interviewer conduct the interview.

In accordance with these findings, Quas and colleagues (2005) also found that children who were interviewed by nonsupportive interviewers had less accurate responses (i.e. greater number of errors) to specific questions than children interviewed by supportive interviewers. A possible interpretation of Quas and colleagues' (2005) findings are that children who are interviewed by supportive interviewers may be able to provide more specific answers because they experience comfort and thus a reduced need to avoid distressing stimuli and fewer demands on their working memory. Contrastingly, it is possible that children who are interviewed by a nonsupportive interviewer feel more pressure to answer which places more demands on their working memory to retrieve information and may increase anxiety. It has been found that anxiety decreases children's working memory performance including the ability to recall information

(Hadwin, Brogan, & Stevenson, 2005; Saywitz & Nathanson, 1992). Therefore, it is possible that children interviewed by nonsupportive interviewers may display less accurate information than children who established rapport and felt supported by their interviewer.

### **Limitations and Suggestions for Rapport-Building Procedures**

Frequently used rapport-building techniques as previously mentioned, are not without their limitations. For example, it is estimated that children with developmental disabilities are more likely to be maltreated than children without disabilities in Canada (Roeher Institute, 2000). Depending on their level of functioning, these children may be interviewed on suspected child abuse incidents. It is commonly known that the diagnoses of many developmental disorders are associated with symptoms of social functioning deficits (e.g., lack of social interest, impaired receptive language skills, poor communication skills; American Psychiatric Association, 2013). Therefore, children with developmental disorders may not attend or respond to verbal and nonverbal behaviours typically used to build rapport.

As previously mentioned, suggestibility is a concern when assessing the accuracy of child testimonies. One possibility to reduce this concern may be to teach children metacognition skills during rapport-building phases prior to interviewing (e.g., evaluating their own knowledge base). If children are able to more accurately assess information that they know to be true and inhibit information that they are not confident they witnessed, it may decrease their vulnerability to accepting misinformation. A simple strategy that could be examined is asking children during interviews if the information is something that they personally remember or if they heard it from someone else.

### **Forensic Interviewing Procedures with Children**

For the past twenty years, the cognitive interview has been used by professionals to interview children about past events. Originally developed by Fisher and Gieselmann (1992), the cognitive interview uses strategies based on cognitive research (Flexser & Tulving, 1978; Melton, 1963; Loftus & Palmer, 1974; Tulving, 1974; Tulving & Thomson, 1973) to facilitate the recall of events. Some of these strategies include mentally imagining the event (also known as cognitive reinstatement), reducing visual interference by clos-

ing eyes during recall, being aware of the interviewee's current thoughts and mental images, minimizing new false memory construction, and effectively communicating the procedures to the interviewee. Researchers have found that when the cognitive interview is used with children, they correctly recall more specific event details than children interviewed with an alternate interview protocol (Akehurst, Milner, & Kohnken, 2003; Larsson, Granhag & Spjut, 2003; Holliday, 2003). This suggests that the cognitive interview is a more effective means of collecting sensitive information from children about past events than interviewing methods that do not use cognitive strategies (e.g., SP).

According to this protocol, interviewers are encouraged to build rapport with interviewees during the introductory phase of the interview. It is suggested that rapport be established by personalizing the interview and communicating empathy (Fisher & Geiselman, 1992). Interviewers can personalize the interview by frequently using the interviewee's name and getting to know the interviewee as an individual. Communicating empathy requires the interviewer to actively listen to and acknowledge the interviewee's feelings and concerns about the situation. A study by Saywitz, Geiselman, and Bornstein (1992) found that questions detectives used to facilitate rapport with children prior to the cognitive interview related to their school activities, personal details (e.g., age), the interview procedure, and their family. These are some of the strategies interviewers currently use to try to establish rapport with children. These strategies have evolved over time as research in this area progresses (Colomb, Ginet, Wright, Demarchi, & Sadler, 2013; Davis, McMahon, & Greenwood, 2005; Holliday 2003; Memon, Meissner, & Fraser, 2010). It is expected that more strategies to build rapport specifically with children will be developed and implemented in interview protocols in the future.

## Conclusions

Currently, it appears that rapport is related to numerous beneficial results from forensic interviewing including greater self-disclosure and accuracy in reporting. It is based on these benefits that building rapport with interviewees is encouraged prior to standard interview procedures (Fisher & Geiselman, 2010). Two of the most commonly used protocols—the National Institute of Child Health and Human Development Investigative Interview and cognitive interview—incorporate rapport-building components.

However, rapport-building practices prior to interviews with children with developmental disorders is not well-established. Researchers should explore other avenues of rapport development with children who may lack verbal and social interaction skills. Future research should also seek to maximize rapport's beneficial contributions (e.g., greater detail, lengthier responses, greater accuracy) while finding ways to control for its limitations (e.g., suggestibility). Researchers have begun to explore how preschoolers experience feelings of uncertainty which is an important step in assessing children's perceived accuracy of memories and metacognitive abilities (Ghetti, Hembacher, & Coughlin, 2013). Researchers are encouraged to explore the combined effects of rapport and metacognitive skills on children's recall of memories in order to facilitate the self-disclosure of child abuse and neglect.



## References

- Akehurst, L., Milne, R., & Kohnken, G. (2003). The effects of children's age and delay on recall in a cognitive or structured interview. *Psychology, Crime & Law*, 9, 97–107.
- Almerigogna, J., Ost, J., Akehurst, L., & Fluck, M. (2008). How interviewers' nonverbal behaviors can affect children's perceptions and suggestibility. *Journal of Experimental Child Psychology*, 100(1), 17–39.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Bernieri, F.J. (2005). The expression of rapport. From Manusov, V. (Ed), *The sourcebook of nonverbal measures: Going beyond words*. , (pp. 347–359). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Collins, K., Doherty-Sneddon, G., & Doherty, M.J. (2014). Practitioner perspectives on rapport building during child investigative interviews. *Psychology, Crime & Law*, 20(9), 884–901.
- Colomb, C., Ginet, M., Wright, D., Demarchi, S., & Sadler, C. (2013). Back to the real: Efficacy and perception of a modified cognitive interview in the field. *Applied Cognitive Psychology*, 27(5), 574–583.
- Davis, M. R., McMahon, M., & Greenwood, K. M. (2005). The efficacy of mnemonic components of the cognitive interview: Towards a shortened variant for time-critical investigations. *Applied Cognitive Psychology*, 19, 75–93.
- Eisen, M. L., Goodman, G. S., Qin, J., Davis, S., & Crayton, J. (2007). Maltreated children's memory: Accuracy, suggestibility, and psychopathology. *Developmental Psychology*, 43, 1275–1294.
- Faranda, W.T., & Clarke I., III. (2004). Student observations of outstanding teaching: Implications for marketing educators. *Journal of Marketing Education*, 26(3), 271–281.

- Fisher, R. P., & Geiselman, R. E. (1992). *Memory enhancing techniques for investigative interviewing: The cognitive interview*. Springfield, IL: Charles C. Thomas.
- Fisher, R.P., & Geiselman, R.E. (2010). The cognitive interview method of conducting police interviews: Eliciting extensive information and promoting therapeutic jurisprudence. *International Journal of Law and Psychiatry*, 33(5-6), 321-328.
- Flexser, A.J., & Tulving, E. (1978). Retrieval independence in recognition and recall. *Psychological Review*, 85(3), 153-171.
- Ghetti, S., Hembacher, E., & Coughlin, C.A. (2013). Feeling uncertain and acting on it during the preschool years: A metacognitive approach. *Child Development Perspectives* 7(3), 160-165.
- Gurland, S.T., & Grolnick, W.S. (2003). Children's expectancies and perceptions of adults: Effects on rapport. *Child development*, 74(4), 1212-1224.
- Hadwin, J.A., Brogan, J., & Stevenson, J. (2005). State anxiety and working memory in children: A test of processing efficiency theory. *Educational Psychology*, 25(4), 379-393.
- Hershkowitz, R., Lamb, M.E., & Katz, C. (2014). Allegation rates in forensic child abuse investigations: Comparing the revised and standard NICHD protocols. *Psychology, Public Policy, and Law*, 20(3), 336-344.
- Holliday, R. (2003). Reducing misinformation effects in children with cognitive interviews: Dissociating recollection and familiarity. *Child Development*, 74, 728-751.
- Larsson, A.S., Granhag, P.A., & Spjut, E. (2003). Children's recall and the cognitive interview: Do the positive effects hold over time? *Applied Cognitive Psychology*, 17(2), 203-214.
- Loftus, E.F., & Palmer, J.C. (1974). Reconstruction of automobile destruction: An example of the interaction between language and memory. *Journal of Verbal Learning & Verbal Behavior*, 13(5), 585-589.
- London, K., Bruck, M., Ceci, S.J., & Shuman, D.W. (2005). Disclosure of child sexual abuse: What does the research tell us about the ways that children tell? *Psychology, Public Policy, and Law*, 11(1), 194-226.
- McLarney-Vesotski, A.R., Bernieri, F., & Rempala, D. (2006). Children can accurately see personality traits within minutes of meeting: Personality perception: A developmental study. *Journal of Research in Personality*, 40(5), 652-674.
- Melton, A.W. (1963). Implications of short-term memory for a general theory of memory. *Journal of Verbal Learning and Verbal Behavior*, 2, 1-21.
- Memon, A., Meissner, C.A., & Fraser, J. (2010). The cognitive interview: A meta-analytic review and study space analysis of the past 25 years. *Psychology, Public Policy, and Law*, 16(4), 340-372.
- Quas, J.A., Wallin, A.R., Papini, S., Lench, H., & Scullin, M.H. (2005). Suggestibility, social support, and memory for a novel experience in young children. *Journal of Experimental Child Psychology*, 91(4), 315-341.
- Queen's Printer. (1990). *Child and Family Services Act*.
- Queen's Printer. (2016). *Child, Family and Community Service Act*.
- Roeher Institute. (2000) Count Us In: A Demographic Overview of Childhood and Disability in Canada. North York: L'Institut Roeher Institute.
- Rotenberg, K.J., Eisenberg, N., Cumming, C., Smith, A., Singh, M., & Terlicher, E. (2003). The contribution of adults' nonverbal cues and children's shyness to the development of rapport between adults and preschool children. *International Journal of Behavioral Development*, 27(1), 21-30.
- Ruddock, A.C. (2004). The relationship of interviewer rapport behaviors to the amount and type of disclosure from children during child abuse investigations. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 67(4-B).
- Saywitz, K.J., Geiselman, R.E., & Bornstein, G.K. (1992). Effects of cognitive interviewing and practice on children's recall performance. *Journal of Applied Psychology*, 77(5), 744-756.
- Saywitz, K., & Nathanson, R. (1992). *Effects of environment on children and perceived stress*. In B. Bottoms & M. Levine (Chairs), Actual and perceived competency of child witness. Symposium conducted at the annual convention of the American Psychological Association, Washington, DC.
- Tickle-Degnen, L., & Rosenthal, R. (1990). The nature of rapport and its nonverbal correlates. *Psychological Inquiry*, 1(4), 285-293.
- Tulving, E. (1974). Recall and recognition of semantically encoded words. *Journal of Experimental Psychology*, 102(5), 778-787.
- Tulving, E., & Thomson, D.M. (1973). Encoding specificity and retrieval processes in episodic memory. *Psychological Review*, 80(5), 352-373.

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