# Canadian Undergraduates' Perspectives on Medical Assistance in Dying (MAiD): A Quantitative Study

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### **Abstract**

**Background and Objectives:** In 2016, Medical Assistance in Dying (MAiD) became legal in Canada for those suffering a grievous and untreatable medical condition. Currently, it is not available to minors or to those with an untreatable mental illness, although it is likely the scope of MAiD will be widened to include persons with severe and untreatable mental illnesses. However, little is known about the factors predicting acceptance or rejection of MAiD for persons with either a grievous medical condition or an untreatable mental illness. **Methods:** A survey was administered to 438 undergraduate students to examine factors associated with their acceptance or rejection of MAiD. The survey included four different scenarios: a young or old person with an untreatable medical condition, and a young or old person with an untreatable mental illness. Demographic questions (age, sex, religion, etc), personality measures, and an attitude towards euthanasia scale were also administered, as well as questions assessing participants' general understanding of MAiD and their life experiences with death and suicide. **Results/Conclusion:** Overall, most of the Canadian undergraduate participants accepted MAiD for both terminally ill and mentally ill patients; however, different variables, such as age, religion, and ethnicity, predicted the acceptance or rejection of MAiD for each scenario.

### **Keywords**

assisted suicide, canada, end of life, euthanasia medical assistance in dying, mental illness, personality

# Introduction

In 2015, the Supreme Court of Canada ruled in favour of Carter (Carter v. Canada) and unanimously struck down the ban on medical assistance in dying (MAiD). The Criminal Code of Canada was amended to allow those with grievous, irremediable medical conditions whose death is reasonably foreseeable to choose MAiD. As defined in the Criminal Code of Canada (1985),<sup>2</sup> MAiD is the administering of a substance to a person, at their request by a physician or nurse practitioner, that causes their death; or at the request of the person, the prescribing or providing by a physician or nurse practitioner of a substance so that the individual may selfadminister the substance and in doing so cause their own death. Furthermore, Section 227.1 exempts MAiD from being considered homicide and states that physicians or nurse practitioners will not be committing homicide if they provide MAiD in accordance with the laws stated in Section 241.2 of the Criminal Code. Additionally, the act of providing MAiD is exempt from being culpable of counselling or aiding suicide under Section 241.2.

With an aging population, discussions about end-of-life decisions are becoming more prevalent in our daily lives.<sup>3</sup> These conversations raise significant questions about the

ethics surrounding end-of-life care, particularly for those with a terminal illness. Newly developed medicines and life support machines have allowed life to be prolonged longer than in previous years, but unfortunately these procedures do not ameliorate all diseases or end suffering.<sup>3</sup> These medical advances have created anxiety for patients of all ages who suffer from incurable diseases due to the possibility of extending their pain and suffering by months or even years.<sup>4</sup> There are also many unanswered questions concerning these new life-sustaining measures. For example, how aggressive should life-sustaining procedures be when a person has a medical condition that causes enduring and intolerable pain? Even though MAiD is now legal in Canada, the controversy about its appropriateness remains.

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# Possible Expansions of Criteria for MAiD

There have been suggestions to widen the scope of MAiD to include persons with severe and untreatable mental illness,<sup>5-8</sup> which has added to the controversy. Currently, the Netherlands and Belgium have broadened the scope of MAiD to include individuals with a psychiatric condition (eg, schizophrenia, depression, bipolar disorder).<sup>5</sup> Because the Supreme Court of Canada did not distinguish between physical and psychological suffering, Walker-Renshaw and colleagues argue that this lack of distinction opens up the possibility of expanding the scope of MAiD to include those with an incurable mental illness.<sup>8</sup> Of note is that, since this research was conducted, the criteria for MAiD for terminal illness has expanded to include those with a terminal illness whose death is *not* in the foresee-able future.<sup>9</sup>

# Beliefs and Attitudes That may Influence Acceptance or Rejection of MAiD

Little is known about the factors that predict acceptance (ie, the belief that MAiD should be allowed as stated under the Criminal Code of Canada) or rejection (ie, the belief that MAiD should not be allowed) of MAiD. The majority of studies have been conducted outside of Canada, specifically in the United States and Europe. 3,10-12 For example, research in the United States has generally used university populations. 3,4,13 and found that religion is an important predictor of the rejection of MAiD.3,13 Research in Europe has been mostly conducted with the general population and has shown that religion, 11,14 the amount of suffering,<sup>4</sup> and the age of the person with the illness<sup>15</sup> significantly predict the acceptance or rejection of MAiD. The limited research conducted in Canada has been done on the attitudes of medical students. 16-18 The findings suggest that medical students are generally in favour of MAiD. For example, Bator and colleagues<sup>16</sup> found that education, clinical experience, and patient autonomy were important predictors of medical students' stance on acceptance of MAiD, whereas religious beliefs and personal experience with death were not predictive. Falconer and colleagues, 17 however, found that medical students who identified as nonreligious and did not attend church were more supportive of MAiD. Similarly, Pomfret and colleagues<sup>18</sup> found that British medical students who identified as non-religious were more likely to support MAiD.

It is important to extend the range of students to include other groups in order to expand the generalizability of the findings. Most of our current knowledge of young people's attitudes comes from surveys of American undergraduates. In a review of the literature on student attitudes toward Euthanasia (which MAiD is called in the United States), Weiss and Lupkin<sup>3</sup> found five factors that potentially influence those attitudes. These were general philosophical and religious beliefs, fears about one's death and the dying process, amount of information about and exposure to the issue of MAiD, characteristics of the community where one lives, and certain personal background

characteristics. Interestingly, political affiliation had the most influence, with those students self-identifying as Democrats being more likely than those self-identifying as Republicans to support Euthanasia.

Although these findings are noteworthy and add considerably to the knowledge available, we know very little about Canadian undergraduates' perspective on MAiD. The purpose of this study is to fill that gap. We administered a survey to students at an undergraduate university in Canada and incorporated many of the variables used in previous studies to assess if these would also predict Canadian students' acceptance or rejection of MAiD. The survey also included questions regarding MAiD for individuals with mental illness since this will likely become law in the near future. We hypothesized that a range of variables such as participants' personality, life experience with death and suicide, and coping strategies would be associated with the acceptance or rejection of MAiD.

### **Method**

# **Participants**

The survey was conducted in the fall semester of 2019 and was completed by 438 undergraduate students at MacEwan University. The study was approved by MacEwan University's Research Ethics Board (Study #101718). Participants provided informed, written consent and received 2% course credits in their introductory psychology classes for participating. The data was fully anonymized such that students' responses could not be identified. Inclusion criteria were being a student in an introductory psychology class. There were no exclusion criteria.

# Questionnaires

Participants completed all questionnaires in the order below. In order to avoid influencing participants' attitudes, we chose to place the scenarios first. Participants were not given any prior knowledge about hospice or palliative care. The only data that were excluded were incomplete data. A quantitative study design was chosen because the questions were administered in a survey.

Scenarios. Participants began by reading four scenarios that described either a young or old person with either a terminal illness or a mental illness (see Table 1).

After reading each scenario, participants were asked to select what they believe would be the best possible option for that patient. For the medical condition scenarios, participants were given the following options: (a) passive euthanasia: allowing all life-sustaining procedures to be removed from the patient, (b) physician-assisted death: allowing the physician to provide a sufficient amount of medication to cause death but without the physician actually administering it, (c) active euthanasia: allowing the physician to directly administer a lethal injection to the patient, (d) deny the request, or (e) prefer not to answer. For the incurable mental illness scenarios, participants

**Table 1.** Scenarios Presented to Participants at the Beginning of the Survey.

Scenarios	
Old and Terminal	Justin is 85 years old. He has had terminal medical condition for the past five years. He is receiving the best possible care but is still in pain. Pain medication cannot relieve his suffering. He is in good mental health. He has freely made a voluntary request for medical assistance in dying. Based on the scenario above, what do you believe the best option is for Justin?
Young and Terminal	Justin is 18 years old. He has had a terminal medical condition for the past five years. He is receiving the best possible care but is still in pain. Pain medication cannot relieve his suffering. He is in good mental health. He has freely made a voluntary request for medical assistance in dying. Based on the scenario above, what do you believe the best option is for Justin?
Old and Mental Illness	Justin is 85 years old. He has a severe, incurable mental health illness that causes him enduring psychological suffering for the past five years. He is receiving the best possible care. Medication and psychotherapy cannot relieve his suffering. He is in good physical health. He has freely made a voluntary request for medical assistance in dying. Based on the scenario above, what do you believe the best option is for Justin?
Young and Mental Illness	Justin is 18 years old. He has a severe, incurable mental health illness that causes him enduring psychological suffering for the past five years. He is receiving the best possible care. Medication and psychotherapy cannot relieve his suffering. He is in good physical health. He has freely made a voluntary request for medical assistance in dying. Based on the scenario above, what do you believe the best option is for Justin?

Note. Response options are given in the text in the Method section. Passive Euthanasia was not an option for the two mental illness scenarios.

were given the following options: (a) physician-assisted death, (b) active euthanasia, (c) deny the request, or (d) prefer not to answer. Passive euthanasia was not included in the mental illness conditions since there are no life-sustaining procedures to be removed from a patient with a mental illness.

Demographics. Participants were asked for demographic information such as their age, sex, level of education, income, and marital status. Participants were also asked for their ethnicity, political views, and their religious background and behaviours.

*Personality.* The 44-item Big Five Inventory (BFI)<sup>19</sup> was used to assess the five standard dimensions of personality (extraversion, openness-to-experience, conscientiousness, neuroticism, and

Table 2. Older Person with Terminal Illness Correlations.

Older Person with	n Terminal Illness			
Variable		N	Pearson r	P-value
Marital Status	Single	421	0.105	0.031
	Common Law	421	-0.120	0.014
Ethnicity	African	414	-0.274	<.001
	Caucasian	414	0.133	0.007
	Middle Eastern	414	-0.107	0.029
Religion	Do you have religious beliefs?	425	-0.142	0.003
	Christian	420	-0.104	0.033
	None	420	0.129	0.008
	Rate religiosity on a scale of 1 to 5	414	-0.244	<.001
Personality	Neuroticism	427	0.131	0.007
Discussion and	Priest	423	-0.153	0.002
Experience	TV	425	0.114	0.019
Life Experiences	Death of a loved one	426	-0.105	0.030
	Thought about committing suicide	426	0.100	0.039

agreeableness). Participants were asked to select the extent to which they agreed with the statements on a 5-point scale ( $I = disagree \ strongly$ ),  $S = agree \ strongly$ ).

Depression. The Beck Depression Inventory<sup>20</sup> is a 21-item questionnaire that measures the severity of depression. This item was included to assess if aspects of depression correlate with acceptance of MAiD. Participants were asked to rate on a 4-point scale (eg, 0 = I do not feel sad, 1 = I feel sad, 2 = I am sad all the time and can't snap out of it, 3 = I am so sad and unhappy that I can't stand it) how they have been feeling during the past two weeks.

Coping. The Coping Strategies Indicator<sup>21</sup> is a 33-item questionnaire that measures the tendency to problem-solve and seek social support rather than avoid problems. Participants were asked to think of a recent stressful event and rate on a 3-point scale  $(1 = not \ at \ all, 3 = a \ lot)$  the extent to which they used certain coping mechanisms (eg, "I let my feelings out to my friends") during this stressful event.

General beliefs about MAiD, Death, and Suicide. Participants were asked to rate on a 5-point scale (1 = not at all, 5 = very much) the amount of discussion they have had about MAiD with family members, friends, medical providers and clergy; the amount of exposure they have had to MAiD through reading, viewing and reflecting upon the topic; and their overall knowledge of MAiD. Participants were also asked about their life experiences with end-of-life decisions and with death, mental illness, and suicide.

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Table 3. Younger Person with Terminal Illness Correlations.

Younger Person with Terminal Illness				
Variable		N	Pearson r	P-value
Income	\$90,000 to 120,000	349	0.126	0.022
Ethnicity	African	424	-0.163	0.001
•	Asian	424	-0.113	0.024
	Caucasian	424	0.172	0.001
Political Stance	NDP	429	0.165	0.001
	Conservative	429	-0.145	0.003
Religion	Religious Beliefs	435	-0.210	<.001
· ·	Christian	43 I	-0.113	0.023
	Islam	43 I	-0.099	0.045
	None	43 I	0.190	<.001
	Rate religiosity on a scale of 1 to 5	424	-0.280	<.001
Discussion and	Family	437	0.120	0.015
Experience	Friend	432	0.113	0.022
	Reflection	437	0.187	<.001
	Overall Knowledge	437	0.133	0.022
EAS	Score	437	-0.178	<.001

<sup>\*</sup>EAS (Euthanasia Attitude Scale).

Interpersonal Needs Questionnaire. The Interpersonal Needs Questionnaire  $^{22}$  is a 14-item scale used to assess why individuals engage in suicidal behaviour and identify those who are at risk for suicide. The questionnaire is divided into two sections: thwarted belongingness (TB) and perceived burdensomeness (PB). This scale was used to assess if suicidal ideation, particularly TB or PB, are predictors of acceptance of MAiD. Participants were asked to rate on a 7-point scale ( $1 = not \ at \ all \ true \ for \ me$ ,  $7 = very \ true \ for \ me$ ) the number that best matches how they feel after each item.

Attitudes Toward Euthanasia. The Euthanasia Attitudes Scale<sup>23</sup> is a 10-item questionnaire that measures individuals' attitudes toward euthanasia. Participants were asked to rate on a 5-point scale ( $1 = strongly \ disagree$ ,  $5 = strongly \ agree$ ) the degree that they agree with each statement.

Participants first completed the scenarios to ensure that their responses to them were not influenced by any of the other questionnaires. Participants then completed the demographics,

Table 4. Older Person with Mental Illness Correlations.

Older Person with Mental Illness				
Variable		N	Pearson r	P-Value
Religion	Religious Beliefs	435	-0.133	0.022
	Rate religiosity on a scale of 1 to 5	424	-0.150	0.002
Personality	Agreeableness	438	-0.104	0.034
Discussion and Experience	Priest	434	-0.138	0.005

Table 5. Younger Person with Mental Illness Correlations.

Younger Person with Mental Illness				
Variable		N	Pearson r	P-value
Degree Program	Bachelor of Arts	432	0.105	0.035
	<b>Bachelor of Science</b>	432	-0.122	0.014
Religion	Christian	43 I	-0.102	0.041
	Rate religiosity on a scale of 1 to 5	424	-0.149	0.003
Discussion and Experience	Friend	432	0.121	0.015
EAS	Score	437	-0.118	0.018

personality, depression, and coping inventories followed by the general beliefs about MAiD, death and suicide, the Interpersonal Needs Questionnaire, and the Attitudes Toward Euthanasia Scale in that order. After completing the survey, participants were provided with a debriefing form that outlined in more detail the purpose and nature of the survey.

### Results

A total of 16 participants did not complete one or more items in the survey or selected "prefer not to answer;" their data were therefore excluded from the analysis. Of the remaining 438 participants (131 identified as male, 304 as female, and 3 as Other). Mean age was 21 years (SD 7.2 years and range of 17 to 56 years). Because there was little variation in responses to the passive, active, and physician-assisted death options in the scenarios, the responses for each scenario were collapsed into a binary score of for versus against MAiD (I = for MAiD, O = against MAiD).

Relationship Between Scenarios: In order to determine if there were any differences in support for MAiD across the different scenarios, we ran a chi-square test comparing results, participant support of MAiD (for or against), and the different illnesses (terminal illness vs. mental illness) and the different ages (young vs. old). There was a significant association between all scenarios, suggesting that participant's support for each scenario is dependent on their choice on the other scenarios. For example, there was a significant association in participants' support for MAiD between the young with terminal illness and the young with mental illness scenarios ( $X^2(1)$ ) = 46.32, phi = .34, p < .001), as well as between the older with terminal illness and older with mental illness scenarios ( $X^2(1)$ ) = 30.29, phi = .27, p < .001). There was also a significant association for old with terminal and young with terminal illness scenarios  $(X^2(1) = 43.16, phi = .33, p < .001)$  and old with mental illnesss and young with mental illness scenarios ( $X^2(1)$ ) = 158.10, phi = .63, p < .001)

# Terminal Illness Scenarios

For the older person with terminal illness scenario, 95.3% of the sample (n = 407 of 427) supported MAiD. For this scenario, students were more likely to favour MAiD if they were single

(r=.11, p=.03), Caucasian (r=.13, p<.01), scored higher on neuroticism (r=.13, p<.01), had experience with MAiD through watching television (r=.14, p=.01), and scored higher on the suicidality scale (r=.10, p=.04). By contrast, students were more likely to reject MAiD if they were in a common-law relationship (r=-.12, p=.01), were of African (r=-.27, p<.01) or Middle Eastern (r=-.11, p=.03) ethnicity, indicated that they were religious (r=-.14, p=<.01), held Christian religious beliefs (r=-.10, p=.03), rated themselves higher on religiosity (r=-.24, p<.01), had discussed MAiD with their priest (r=-.15, p<.01), and had experienced the death of a loved one (r=-.11, p=.03).

For the younger person with terminal illness scenario, 78.3% of the sample (n=322 of 411) supported MAiD. Students were more likely to support MAiD if they had a higher income (r=.13, p=.02), were Caucasian (r=.17, p<.01), politically identify as New Democratic (r=.17, p<.01), had discussed MAiD with their family (r=.12, p=.01) or friends (r=.11, p=.02), had reflected upon MAiD (r=.19, p<.01), and had more overall knowledge of MAiD (r=.13, p=.02). Those who were more likely to reject MAiD were of African (r=-.16, p<.01) or Asian (r=-.11, p=.02) ethnicity, identified as Conservative (r=-.15, p<.01), had religious beliefs (r=-.21, p<.01), specifically Christian (r=-.11, p=.02) or Islamic beliefs (r=-.09, p=.04), rated themselves higher on religiosity (r=-.28, p<.01), and scored lower on the Euthanasia Attitudes Scale (r=-.18, p<.01).

# Mental Illness Scenarios

For the older person with mental illness scenario, 77.7% of the sample (n = 324 of 417) supported MAiD. In this scenario, students were more likely to reject MAiD if they had religious beliefs (r = -.13, p = .02), rated themselves higher on religiosity (r = -.15, p < .01), scored higher on the personality trait of agreeableness (r = -.10, p = .03), and had discussed MAiD with their priest (r = -.14, p < .01).

For the younger person with mental illness scenario, 59.1% of the sample (n = 241 of 408) supported MAiD. The students were more likely to support MAiD if they were in the Bachelor of Arts degree program (r = .10, p = .03) and had discussed MAiD with a friend (r = .12, p = .01). The students were more likely to reject MAiD if they were in the Bachelor of Science degree program (r = -.12, p = .01), identified as Christian (r = -.10, p = .04), rated their religious beliefs higher (r = -.15, p < .01), and scored lower on the Euthanasia Attitude Scale (r = -.12, p = .01).

### Discussion

# Summary of Findings

This survey investigated undergraduate students' opinions of MAiD. It is one of the first studies to be conducted on Canadian undergraduate students rather than American or European students. Overall, the results suggest that a majority

(well over 65%) of Canadian undergraduates may support MAiD for those suffering from a terminal illness. The study additionally suggests that the majority of Canadian undergraduates may also support MAiD for those with a severe and untreatable mental illness. However, the age of the patient appeared to be a significant factor in making this choice, with the students being more likely to support MAiD for older persons (92.9% agreement for terminal illness and 74.0% for mental illness than for younger patients (77.7% agreement for terminal illness and 59.1% for mental illness). This is not unusual as death appears to be more acceptable to people when the one who is dying has lived a full life.<sup>24</sup> This finding is also in line with a study by Rae and colleagues<sup>15</sup> which found that age was a significant predictor in determining acceptance or rejection of MAiD.

This study was the first to our knowledge to incorporate a scenario that addressed MAiD for those who suffer from a mental illness. Our findings suggest that undergraduate students are more willing to accept MAiD for those with a terminal illness than for those with a mental illness. This could be for various reasons, such as MAiD for mental illness is a fairly new idea and it is not yet legal under the Canadian Criminal Justice System. Future MAiD studies should focus on examining MAiD for mental illness and investigate why acceptance may be lower for those with mental illness compared to those with terminal illnesses and the specific factors that contribute to the decision.

In keeping with previous findings, this study also found that those who are religious were more likely to reject MAiD, which is consistent with the fact that many religions prohibit suicide and assisted dying. In fact, religion played a role in every scenario which suggests that religion could be one of the main factors in influencing an individual's choice. Further, for the untreatable mental illness scenarios, religiosity was a significant correlate in both the younger and older person scenarios, suggesting that religion is a significant factor that affects decisions about MAiD. However, Christian beliefs appeared most often as predictors of rejection of MAiD, and as such, future research should study how different religions view MAiD and how those views affect individuals' decisions towards MAiD.

Furthermore, those who have discussed MAiD with a family member or friend, but not a priest, are more likely to support MAiD, again suggesting that religion plays an important role in the choice of rejecting or accepting MAiD. This finding also suggests that the people one discusses MAiD with can influence one's beliefs. For example, discussing MAiD with a priest was negatively correlated with the acceptance of MAiD, but discussing MAiD with a friend or family member was positively correlated with the acceptance of MAiD. This finding suggests that social factors may play an important role in students' attitudes toward MAiD, which future studies should further explore. Similarly, ethnicity played a significant role in determining acceptance or rejection of MAiD. Those who identified as Caucasian ethnicity were more likely to support MAiD compared to other ethnicities (ie, African, Asian, Middle Eastern), and this may relate to the Western World becoming more secular.

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Interestingly, political stance was a significant predictor of support for MAiD, but only in the young and terminally ill scenario. Those who identified as being supportive of the NDP were supportive of MAiD, and those who identified as Conservative rejected MAiD, which is in line with American research.<sup>3</sup> These results are in keeping with a recent poll<sup>25</sup> finding that those Canadians of any age who identify as NDP supporters are more likely to support MAiD. The NDP is in fact a strong supporter of MAiD and continues to advocate for the removal of the requirement that death be imminent in order to access medical assistance in dying. They are also in favor of adding provisions to allow some advance requests for MAiD.<sup>26</sup> The NDP are also in favour of broadening the scope of MAiD to include those with an untreatable mental illness as well as provide access for competent minors.

We also found that neuroticism was correlated with support for MAiD in the older person with terminal illness scenario, and agreeableness was correlated with support for MAiD in the older person with untreatable mental illness scenario. People who are neurotic tend to suffer from anxiety and worry, and may therefore have empathized with the distress the older person was experiencing. Furthermore, people who are agreeable tend to engage in more prosocial behaviours such as helping others which could in the case of MAiD, include helping others end their suffering. Future research could further explore the relationship of personality characteristics to the support or rejection of MAiD.

# Limitations

Although these findings elucidate some of the factors that influence undergraduate students' perceptions of MAiD, it has also generated several questions. For example, a limitation of this study is the use of an undergraduate population. Although this population is typically the most convenient, it may not represent the views of the overall student population. It would be helpful to look at other universities and colleges across Canada to determine regional similarities or differences. We also did not control for the participants' knowledge of hospice or palliative care or advanced care planning and this too may influence attitudes about MAiD. Gender differences were not considered, which future studies should examine. Finally, as mentioned previously, the Canadian Criminal Code was recently amended to also include individuals whose death is not reasonably foreseeable. As such, it may be important to further study if this change has an effect on views of MAiD.

# Conclusion

The majority of the Canadian undergraduate participants surveyed accepted MAiD for both terminally ill and mentally ill patients; however, it may be of benefit to gain a better understanding of the factors influencing students' attitudes toward the *specific types* of MAiD (eg, physician administered vs. self-administered vs. passive euthanasia). Given that undergraduates' attitudes tend to be an important marker for

upcoming societal changes, the present findings could also be used as a baseline to examine future changes in attitudes towards MAiD as people become more familiar with it. Understanding these factors is also important because many undergraduates will be going into the healthcare field and may influence future health care decisions about MAiD. Future studies should also incorporate a qualitative component to better understand the factors that influence the acceptance or rejection of MAiD.

The present findings furthermore suggest that MAiD policies should be written in a way that acknowledges or is sensitive to the diverse range of views on this matter, including differences that relate to ethnic and religious background as well as individual differences regardless of such background. This need for sensitivity would apply even more so to medical practitioners who are having discussions about MAiD with their patients and who are faced with the task of implementing such procedures.

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# **Ethical Approval**

The study was approved by MacEwan University's Research Ethics Board (Study #101718).

# **Informed Consent**

Participants provided informed, written consent and received 2% course credits in their introductory psychology classes for participating.

# **Trial Registration**

Not applicable, because this article does not contain any clinical trials.

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