Indexed in Clarivate Analytics WoS

E-B Environment - Behaviour Proceedings Journal

ICEPH-CS2025Kuching

https://iceph-cs.com/

e-IPH e-International Publishing House Ltd., United Kingdom

1st International Conference, Exhibition & Innovation on Public Health & International Community Services

Waterfront Hotel Kuching, Sarawak, Malaysia

19-22 Aug 2025

Organiser: Universiti Teknologi MARA (UiTM), Malaysia
Co-Organisers: Universitas Muhammadiyah Malang (UMM), Indonesia, Unversitas Airlangga (UNAIR), Indonesia, UiTM Technoventure, Malaysia

Challenges and Performance of Cognitive, Behavioral, and Motor Skills in Dakon Gameplay: An initial study on developing Dakon as a therapeutic tool

Muhammad Hidayat Sahid[1-2*], Akehsan Dahlan[1], Mohamad Ghazali Masuri[1], Ratna Darjanti Haryadi[3]

*Corresponding Author

[1] Centre for Occupational Therapy Studies, Faculty of Health Sciences, Universiti Teknologi MARA, 42300 Puncak Alam, Selangor, Malaysia, [2] Vocational Education Program, Universitas Indonesia, Gedung VA, Vokasi UI, Kampus UI Depok 16426, Indonesia, [3] Department of Physical Medicine and Rehabilitation, Dr. Soetomo General Hospital, University of Airlangga, Surabaya, Indonesia

hidayatsahid@ui.ac.id, akehsan@uitm.edu.my, mghazali@uitm.edu.my, ratnasoebadi@yahoo.com
Tel: +62812-1952-7104

Abstract

This observational study examined challenges during Dakon gameplay among typically developing children and those with ADHD. We aimed to describe skill-related difficulties and compare cognitive, behavioral, and motor performance. Thirty children (ages 6–12; 10 ADHD, 20 typical) completed sessions; observers used a checklist. Typical peers significantly outperformed children with ADHD across attention, rule use, social interaction, and fine-motor precision (all $p < .001$). ADHD participants showed shorter attention, more impulsivity, and poorer manipulation of pieces. Findings highlight need for targeted task/environment modifications to optimize therapeutic use of Dakon. Limitations include observational design and sample size.

Keywords: Dakon, ADHD, occupational therapy, therapeutic tools

DOI: https://doi.org/10.21834/e-bpj.v10iSI35.7484

1.0 Introduction

Traditional games are increasingly recognized as culturally anchored occupations that can be therapeutically leveraged in pediatric practice (Waraulia, 2025). Dakon (Congklak), a game requiring grasp release sequencing, bimanual coordination, turn-taking, simple arithmetic, and foresight maps closely onto core skill areas often compromised in ADHD, including sustained attention, working memory, fine-motor dexterity, and self-regulation (Bass et al., 2025; Rens & Joosten, 2014; Sahid, 2019). Although existing educational studies and early reports in other developmental groups suggest developmental benefits, the clinical application of Dakon for ADHD remains under-specified (Wimbarti & Kusrohmaniah, 2023). Furthermore, despite Dakon's apparent alignment with ADHD-related performance deficits, culturally grounded OT interventions are insufficiently described in the literature: prior studies seldom identify which specific

eISSN: 2398-4287 © 2025. The Authors. Published for AMER by e-International Publishing House, Ltd., UK. This is an open access article under the CC BY-NC-ND license (http://c5eativecommons.org/licenses/by-nc-nd/4.0/). Peer–review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers
DOI: https://doi.org/10.21834/e-bpj.v10iSI35.7484

gameplay features trigger cognitive, behavioral, or motor breakdowns, nor do they document supports that restore successful engagement (Abdul Aziz, Dian Novitasari, Muhammad Hidayat Sahid, Nason Azizan, Anik Budiarti dkk, 2025; Nikita et al., 2024; Erlangga, 2023). Current Dakon-related research contributes valuable insights into numeracy, engagement, and motor development, but does not address clinical needs such as therapeutic structuring, task grading, or FITT-based dosing (Darmawijaya et al., 2019; Wimbarti & Kusrohmaniah, 2023; Komariyah et al., 2025). Critically, no existing study has examined which aspects of Dakon pose challenges for children with ADHD, information required before designing a standardized therapeutic protocol.

Without domain level observational evidence, clinicians cannot determine appropriate dosage, grade task difficulty, or apply modifications with fidelity. Therefore, this observational study forms Stage 1 of a multi-phase design-and-development project aimed at defining the modifiable task demands and performance gaps that should guide a clinically implementable Dakon-based occupational therapy protocol. Specifically, the study aims to identify performance differences between typically developing children and children with ADHD during Dakon gameplay, and to identify the cognitive, behavioral, and motor challenges faced by children with ADHD while playing Dakon. Together, the findings generate a quantitative and qualitative baseline of where, when, and how performance diverges in ADHD during authentic gameplay, providing foundational evidence for later protocol elements such as FITT dosing, rule simplification or visual supports, structural or procedural modifications, timing adjustments, and progression criteria.

2.0 Methodology

2.1 *Design and Setting*
A structured observational, between-group study was conducted in a low-distraction therapy space at UI Hospital.

2.2 *Participants*
Children aged 6–11 years participated (N = 20): 10 (50%) had ADHD, and 10 (50%) were typical. Recruitment followed clinic screening and parental consent procedures.

2.3 *Instrument and Coding*
An observational checklist using scoring 0-10 captured five domains: (1) Cognitive & Engagement, (2) Behavior During Gameplay, (3) Motor Skills, (4) Social Interaction, and (5) Game Strategy Understanding. Higher scores indicated better performance.

2.4 *Procedure*
Each child completed a 30–45-minute Dakon session. Trained raters coded behaviors in real-time; discrepancies were resolved through review.

2.5 *Analysis*
Descriptive statistics summarized demographics and domain scores. Group differences were analyzed using one-way ANOVA for domain items and subtotals. Alpha was set at .05 (two-tailed).

2.6 *Ethics*
Approvals were obtained prior to data collection from the UI Hospital Ethics Committee. Parents/guardians provided informed consent, and children gave their assent.

3.0 Results

3.1 *Demographics*

Table 1 Demographic of Participants' Characteristics (N = 20)

Variable		Category	
		Typical Children (n,%)	ADHD Children (n,%)
Boys	6	1 (25%)	0 (0%)
	7	1 (25%)	1 (25%)
	8	0 (0%)	2 (50%)
	9	0 (0%)	1 (25%)
	10	2 (50%)	2 (50%)
	11	0 (0%)	0 (0%)
	Total	4 (100%)	6 (100%
Girls	6	0 (0%)	1 (16,7%)
	7	0 (0%)	1 (16,7%)
	8	2 (33,3%)	1 (16,7%)
	9	2 (33,3%)	1 (16,7%)

	10	1 (16,7%)	0 (0%)
	11	1 (16,7%)	0 (0%)
	Total	6 (100%)	4 (100%)

Table 1 presents the distribution of participant characteristics for 20 children, consisting of 10 typically developing children and 10 children with ADHD, categorized by age and gender. Among boys, typical children were mainly aged 6, 7, and 10, whereas boys with ADHD were more evenly distributed across ages 7–10, with the highest proportion at ages 8 and 10 (50% each). Among girls, typical children were mostly aged 8–11, while girls with ADHD were represented across ages 6–9, each at 16.7%. Overall, the typical group included more girls, while the ADHD group included more boys.

3.2 *Performance differences between typically developing children and children with ADHD during Dakon gameplay*

This section addresses objective 1, which aims to identify performance differences between typically developing children and children with ADHD during Dakon gameplay. To determine the appropriate statistical approach for comparing the two groups, a normality test (Shapiro–Wilk) was first conducted for all domain scores and their subcomponents.

Table 2 Descriptive Statistics and Normality Indicators for Typical and ADHD Children

Variabel		Shapiro–Wilk	
		Typical Child	ADHD Child
Engagement Level (Cognitive)		0.17	0.07
Component of Engagement Level (Cognitive)	Focus on the gameplay	0.01	0.04
	Duration of attention on turns	0.00	0.04
	Interetst in game strategy	0.00	0.04
Behavioral Regulation		0.12	0.01
Component of Behavioral Regulation	Turn-taking compliance	0.00	0.02
	Verbal communication with peers	0.00	0.00
	Use of appropriate game language	0.04	0.00
Fine And Gross Motor Skills		0.00	0.22
Component of Fine And Gross Motor Skills	Ability to manipulate stones	0.00	0.02
	Smoothness of movements	0.00	0.09
	Precision in placing stones	0.00	0.15
	Ability to maintain stable posture during gameplay	0.00	0.05
Social Interaction		0.01	0.01
Component of Social Interaction	Cooperation and communication with peers	0.00	0.00
	Reactions to wins/losses	0.00	0.01
	Ability to handle frustration	0.00	0.02

Game Strategy Understanding		0.07	0.07
Component of Game Strategy Understanding	Ability to plan moves	0.00	0.03
	Anticipating opponent's moves	0.25	0.06
	Adapting strategy based on the game state	0.02	0.02

Table 2 Table 2 shows that many performance variables in both typical and ADHD groups failed the Shapiro–Wilk normality test, especially in cognitive engagement, behavioral regulation, motor skills, and social interaction. Only a few strategy components approached normality. Overall, these results indicate that the assumption of normality was not consistently satisfied across domains or subcomponents in either group. Given these violations, non-parametric statistical technique using the *Mann–Whitney U test* for group comparisons to ensure robust and valid inferential conclusions.

Tabel 3 Results of Mann–Whitney U Test for Differences Performance Between Typical and ADHD Children

Variable		Group	N	Median (IQR)	U	Z	Asymp. Sig. (2-tailed)
Engagement Level (Cognitive)							
Component of Engagement Level (Cognitive)	Focus on the gameplay	Typical Child	10	9.00 (9.00-9.00)	0.00	-3.85	0.00
		ADHD Child	10	6.00 (5.95-7.00)			
	Duration of attention on turns	Typical Child	10	9.00 (9.00-10.00)	0.00	-3.86	0.00
		ADHD Child	10	5.00 (5.00-7.00)			
	Interest in game strategy	Typical Child	10	9.00 (9.00-10.00)	-3.86	0.00	-3.86
		ADHD Child	10	5.00 (5.00-7.00)			
Total		Typical Child	10	28.00 (27.95-28.00))	0.00	-3.82	0.00
		ADHD Child	10	16.00 (15.90-20.00)			
Behavioral Regulation							
Component of Behavioral Regulation	Turn-taking compliance	Typical Child	10	9.00 (9.00-10.00)	0.00	-3.86	0.00
		ADHD Child	10	6.00 (5.90-7.00)			
	Verbal communication with peers	Typical Child	10	10.00 (10.00-10.00)	0.00	-3.99	0.00
		ADHD Child	10	6.00 (5.85-7.00)			
	Use of appropriate game language	Typical Child	10	9.00 (9.00-10.00)	0.00	-3.83	0.00
		ADHD Child	10	5.00 (4.90-6.00)			
Total		Typical Child	10	28.00 (28.00-29.25)	0.00	-3.80	0.00
		ADHD Child	10	17.00 (16.65-20.00)			
Fine And Gross Motor Skills							
Component of Fine and Gross Motor Skills	Ability to manipulate stones	Typical Child	10	10.00 (10.00-10.00)	0.00	-3.98	0.00
		ADHD Child	10	6.00 (5.90-7.00)			
	Smoothness of movements	Typical Child	10	10.00 (10.00-10.00)	0.00	-3.97	0.00
		ADHD Child	10	5.50 (4.95-7.00)			
	Precision in placing stones	Typical Child	10	10.00 (10.00-10.00)	0.00	-3.97	0.00
		ADHD Child	10	5.00			

				(4.95-7.00)			
	Ability to maintain stable posture during gameplay	Typical Child	10	10.00 (10.00-10.00)	0.00	-4.08	0.00
		ADHD Child	10	6.00 (6.00-8.00)			
Total		Typical Child	10	40.00 (40.00-40.00)	0.00	-3.97	0.00
		ADHD Child	10	23.00 (21.80-29.00)			
Social Interaction							
Component of Social Interaction	Cooperation and communication with peers	Typical Child	10	10.00 (10.00-10.00)	0.00	-3.99	0.00
		ADHD Child	10	6.00 (5.85-7.00)			
	Reactions to wins/losses	Typical Child	10	9.00 (9.00-10.00)	0.00	-3.87	0.00
		ADHD Child	10	5.00 (4.85-5.25)			
	Ability to handle frustration	Typical Child	10	9.00 (9.00-10.00)	0.00	-3.86	0.00
		ADHD Child	10	4,50 (3.90-5.25)			
Total		Typical Child	10	28.00 (28.00-30.00)	0.00	-3.84	0.00
		ADHD Child	10	15.50 (14.60-17.50)			
Game Strategy Understanding							
Component of Game Strategy Understanding	Ability to plan moves	Typical Child	10	9.00 (9.00-9.25)	0.00	-3.92	0.00
		ADHD Child	10	5.00 (4.95-6.00)			
	Anticipating opponent's moves	Typical Child	10	8.50 (8.00-9.25)	0.00	-3.82	0.00
		ADHD Child	10	4.50 (3.95-5.00)			
	Adapting strategy based on the game state	Typical Child	10	8.00 (8.00-9.25)	0.00	-3.85	0.00
		ADHD Child	10	3,50 (3.00-5.00)			
Total		Typical Child	10	25.50 (25.00-27.75)	0.00	-3.80	0.00
		ADHD Child	10	13.50 (11.90-16.00)			

Table 3 shows the Mann-Whitney U test results comparing Dakon gameplay performance between typical children and those with ADHD, revealing significant differences ($p < .001$) across all domains. Typical children consistently scored higher in Cognitive Engagement, demonstrating stronger focus, longer attention span, and greater interest in strategy than ADHD peers. Behavioral Regulation also favored typical children, who showed better turn-taking, clearer communication, and more consistent use of appropriate game language, while children with ADHD displayed greater impulsivity and rule-related difficulties.

Motor skill differences were substantial, with typical children achieving perfect or near-perfect scores in stone manipulation, movement smoothness, precision, and posture stability. In contrast, ADHD children showed weaker fine-motor coordination and reduced postural control. Social Interaction patterns similarly indicated better cooperation, emotional responses, and frustration tolerance among typical children. Finally, typical children outperformed the ADHD group in strategic planning, anticipating opponents' moves, and adapting gameplay. Overall, the results highlight consistent multi-domain performance gaps for children with ADHD during Dakon gameplay.

3.3 *The cognitive, behavioral, and motor challenges faced by children with ADHD while playing Dakon*

Table 4 The Median Score of Cognitive, Behavioral, And Motor Challenges Faced By Typical Vs. ADHD Children

Domain	Typical Children	ADHD Children	Difference	% Lower in ADHD
Cognitive Engagement	28.00	16.00	12.00	43%

Behavioral Regulation	28.00	17.00	11.00	39%
Fine & Gross Motor Skills	40.00	23.00	17.00	43%
Social Interaction	28.00	15.50	12.50	45%
Game Strategy Understanding	25.50	13.50	12.00	47%

Table 4 present the median scores by domain for both participants group. In the domain of Cognitive Engagement, which reflects the child's ability to focus and maintain attention during gameplay, children with ADHD scored a median of 6.00 in their focus on gameplay, while typical children scored 9.00. Similarly, the duration of attention per turn was shorter for the ADHD group (Median = 5.00) compared to the typical group (Median = 9.00). Interest in game strategy also showed reduced engagement among children with ADHD (Median = 5.00) relative to typical peers (Median = 9.00). The total cognitive engagement score was 16.00 for children with ADHD versus 28.00 for typical children. The difference was statistically significant, with U = 0.00, Z = -3.82, and p = 0.00.

The most directly relevant domain to the second focus of this research for finger dexterity was fine and gross motor skills. In this area, children with ADHD demonstrated substantially lower performance in all subcomponents. The ability to manipulate the game stones yielded a median score of 6.00 among children with ADHD, compared to 10.00 in the typical group. Smoothness of movement and precision in placing stones were also impaired, with median scores of 5.50 and 5.00 respectively, compared to perfect scores (10.00) for typical children in both areas. In terms of physical control during gameplay, the ability to maintain a stable posture also differed between groups, with children with ADHD scoring 6.00 compared to 10.00. The total median motor skill score was 23.00 for the ADHD group and 40.00 for the typical group. This difference was statistically significant with U = 0.00, Z = -3.97, and p = 0.00.

Although the primary focus of this study is on attention span and finger dexterity, additional findings were observed in behavioral regulation, social interaction, and game strategy understanding. In all these domains, children with ADHD exhibited consistently lower scores compared to typical children, further confirming the multi-faceted challenges faced by this group during structured gameplay.

4.0 Discussion

This study aimed to (1) identify performance differences between typically developing children and children with ADHD during Dakon gameplay, and (2) identify the specific cognitive, behavioral, motor, social, and strategic challenges faced by children with ADHD. The findings strongly support both objectives. Across all domains, children with ADHD performed significantly lower than their typically developing peers, as demonstrated by consistent Mann–Whitney U results ($p < .001$) showing lower medians in engagement, behavioral regulation, motor precision, social interaction, and strategic understanding. These results confirm clear and robust multi-domain performance gaps, directly fulfilling Objective 1.

The observed performance patterns also provide a detailed profile of the specific difficulties experienced by children with ADHD during Dakon, fulfilling Objective 2. The ADHD group showed shorter attention spans, weaker sustained engagement, and difficulty maintaining focus across turns, consistent with well-established ADHD characteristics of diminished sustained attention and working-memory insufficiencies (AOTA, 2020; Erlangga, 2023). Behavioral regulation challenges were also prominent, including inconsistent turn-taking, impulsive moves, and reduced use of appropriate game language. These findings align with known deficits in inhibitory control and self-regulation in ADHD, confirming that Dakon gameplay effectively surfaces real-time behavioral barriers that OT practitioners must anticipate.

Motorically, children with ADHD demonstrated poorer precision, greater variability in grasp–release sequencing, and difficulty maintaining stable posture. These findings reinforce earlier work documenting fine-motor delays and reduced postural endurance in ADHD, and they highlight specific task components, such as stone manipulation, smoothness, and hole-targeting, that warrant therapeutic grading. Socially, children with ADHD showed lower cooperation, limited reciprocity, and stronger negative reactions to wins or losses, reflecting emotional regulation vulnerabilities and difficulty maintaining peer-related engagement (Darmawijaya et al., 2019).

The results also clarify how these challenges map onto modifiable features of the Dakon environment and task. Because each deficit is tied to observable breakdowns, OT practitioners can intervene using structured supports. A quiet, predictable environment directly targets distractibility; graded objects (e.g., larger stones) address fine-motor instability; visual rule cues reduce working-memory demands; turn tokens and timers support inhibitory control; and micro-dose rounds match the endurance patterns observed in ADHD. These findings align with Motor Learning, Cognitive Behavioral, and Person-Environment-Occupation frameworks, demonstrating why structured, graded, and externally supported gameplay enhances participation (Abdul Aziz, Dian Novitasari, Muhammad Hidayat Sahid, Nason Azizan, Anik Budiarti dkk, 2025).

Importantly, the results justify the development of a standardized Dakon-based OT protocol rooted in real performance barriers. The distinct gaps, attention lapses, impulsive rule use, imprecision, poor postural stability, emotional dysregulation, and weak strategy, serve as concrete anchors for FITT specifications, difficulty progression, and the design of visual, motor, and behavioral supports. These insights also reinforce the cultural relevance and feasibility of Dakon as a therapeutic tool, given its familiarity, low cost, and natural alignment with multi-domain skill demands.

Overall, the findings confirm that Dakon gameplay provides a highly sensitive and ecologically valid medium for identifying ADHD-related performance breakdowns. The data obtained in this Stage I study form a crucial foundation for the next phases of protocol development, ensuring that task modifications, progression criteria, and therapeutic guidelines are aligned with actual, observed

challenges rather than assumptions. The study therefore advances the integration of culturally grounded play into evidence-informed occupational therapy for children with ADHD.

5.0 Limitations

This Stage I observational study has several methodological limitations that should be considered when interpreting the findings. First, the sample was drawn from a single hospital using convenience sampling, which limits external validity and may reflect the service patterns of one clinical setting rather than the broader ADHD population. Second, the study employed a cross-sectional, single-session design, capturing performance only during one structured encounter. As a result, the data may not fully represent natural day-to-day variability, medication cycles, or learning effects across repeated gameplay factors that may influence attention, behavior, and motor performance.

Third, although a standardized observational checklist was used, ratings were not blinded and inter-rater reliability was not formally established. This introduces potential expectancy bias and increases the possibility of measurement error. Some checklist items were researcher-developed and, while grounded in task analysis and OT theory, have not yet undergone psychometric validation, limiting confidence in measurement precision. Fourth, group differences may have been influenced by unmeasured variables such as prior familiarity with Dakon, medication status, comorbid conditions, and slight imbalances in age or gender distribution. Environmental factors, including room setup, seating comfort, and rapport with facilitators, may also have affected children's engagement and motor control.

Fifth, the study involved multiple comparisons within a relatively small dataset. Without formal corrections for multiplicity, the risk of Type I error is elevated, although the consistency and magnitude of the differences observed across domains mitigate this concern. Finally, because this study was descriptive and observational, task features such as stone size, timing, or rule complexity were not experimentally manipulated. Therefore, causal conclusions about which specific modifications improve performance cannot be drawn from Stage I alone.

Despite these limitations, the results showed consistent and theoretically coherent group differences across cognitive, behavioral, motor, social, and strategic domains. These patterns provide a strong empirical foundation for the next phases of development, which include refining measurement tools, implementing blinded double-coding procedures, and conducting expert consensus and feasibility testing to strengthen the reliability and applicability of the Dakon-based therapeutic protocol.

Even with these limitations, effect directions were consistent and significant across domains, providing a coherent "challenge profile" to guide protocol design. Subsequent phases mitigated several issues by (i) refining the measurement set, (ii) specifying blinded double-coding with reliability checks, and (iii) moving to structured consensus and feasibility testing of the protocol in broader contexts.

6.0 Conclusion

This study fulfilling objective 1 and also addressed objective 2 by identifying ADHD-specific challenges, including attention lapses, impulsive turn-taking, imprecise stone manipulation, low frustration tolerance, and limited strategic planning during real-time play.

Acknowledgements

The author thanks the participating children and families, UI Hospital, Occupational Therapists at UI Hospital, and colleagues who supported data collection.

Ethical Clearance

Ethical approval was obtained from the UI Hospital Ethics Committee with ID S-050/KETLIT/RSUI/II/2025 prior to data collection. Written informed consent/assent procedures were followed.

References

Abdul Aziz, Dian Novitasari, Muhammad Hidayat Sahid, Nason Azizan, Anik Budiarti dkk. (2025). *Terapi Okupasional: Teori ke Praktik*. Eureka Media Aksara. https://penerbiteureka.com/2025/09/29/terapi-okupasional-teori-ke-praktik/

Bass, J. D., de Sam Lazaro, S. L., & Baum, C. M. (2025). Person-environment-occupation-performance model. In *Routledge Companion to Occupational Therapy* (pp. 330–344). Routledge.

Darmawijaya, I. P., Kristianawati, F., & Pramita, I. (2019). *Congklak Modification To Improve Fine Motor Skills In Children With Down Syndrome*. International Conference on Fundamental and Applied Research (I-CFAR).

Erlangga, E. (2023). The Effect of Traditional Games on Early Childhood Cognitive Development. *Journal of Education on Social Issues*, *2*(1), 1–18.

Komariyah, K., Amelia, A., Meriyati, M., & Jatmiko, A. (2025). Development of Animal-Shaped Dakon Seeds Media to Enhance Early Childhood Cognitive Skills. *Ceria: Jurnal Program Studi Pendidikan Anak Usia Dini*, *14*(3), 747–761.

Nikita, T., Mustafa, M., & Syamsuddin, S. (2024). Development of Portable Dakon Media to Improve Calculation Skills in Fourth Grade Mentally Disabled Students in Special Schools. *Pinisi Journal of Education*, *4*(5), 262–272.

Rens, L., & Joosten, A. (2014). Investigating the experiences in a school-based occupational therapy program to inform community-based paediatric occupational therapy practice. *Australian Occupational Therapy Journal*, *61*(3), 148–158.

Sahid, M. (2019). Correlation of overweight and academic achievement at grade 1-3 pupil at school of highscope Indonesia 2018. *Health Science Journal of Indonesia*, *10*(1), 32–39.

Waraulia, A. M. (2025). Dakon Game as a Culture-Based Strategy for Collaborative Indonesian Learning. *EDUKASIA Jurnal Pendidikan Dan Pembelajaran*, *6*(1), 521–536.

Wimbarti, S., & Kusrohmaniah, S. (2023). ADHD among Indonesian primary school students: Measurement and prevalence. *J Educ Heal Community Psychol*, *12*(1), 236.